

Figure 1

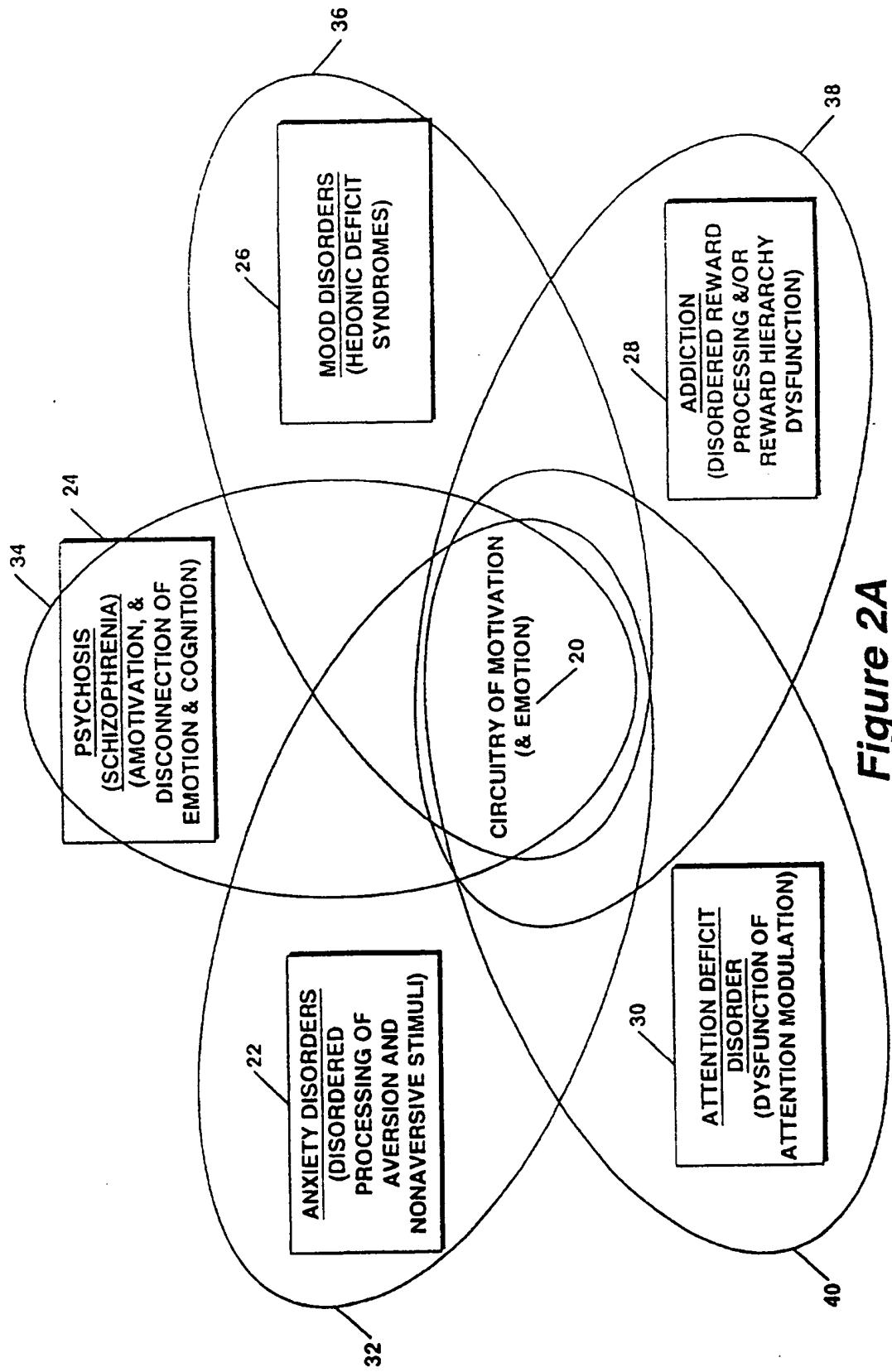


Figure 2A

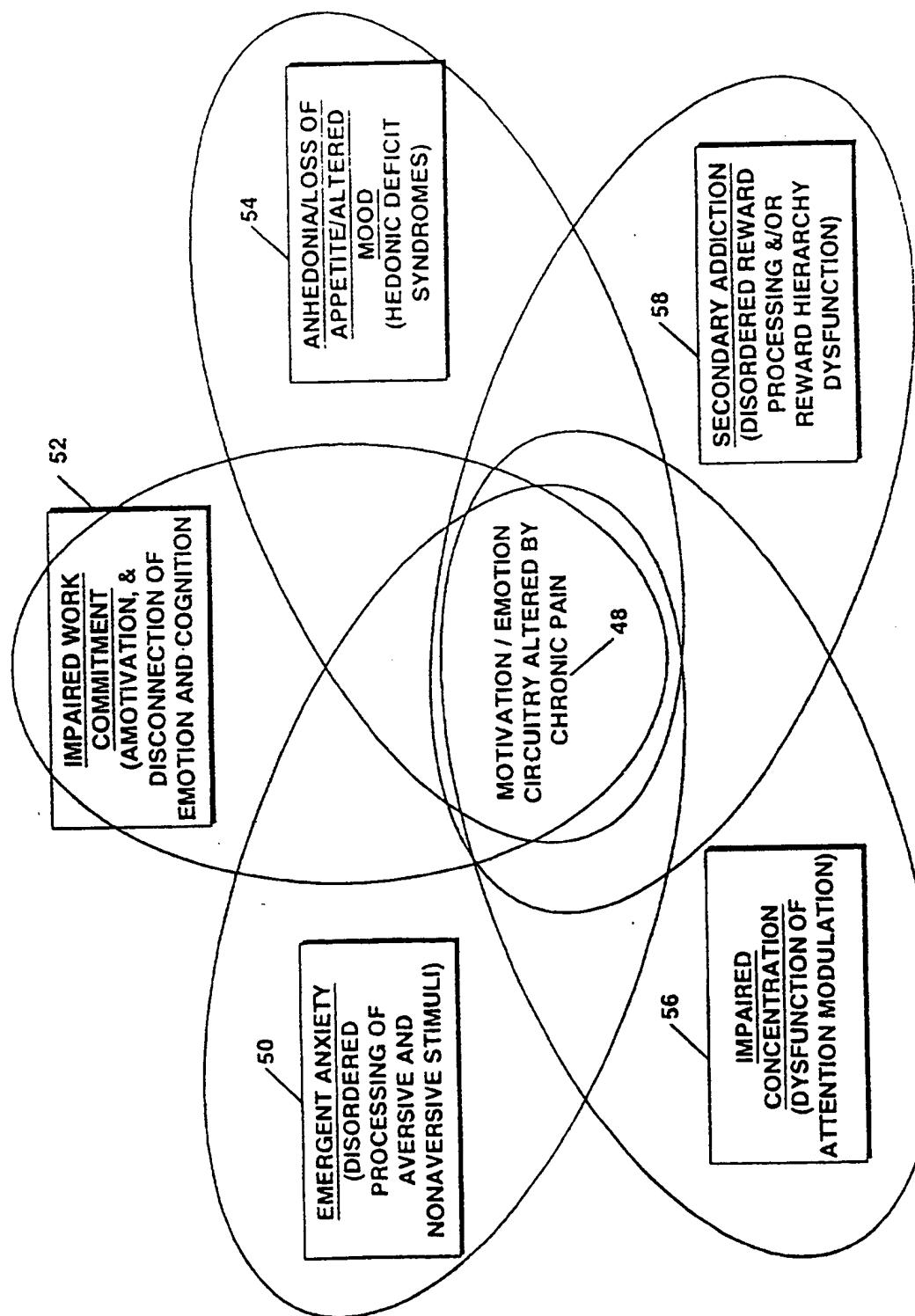


Figure 2B

Figure 2C

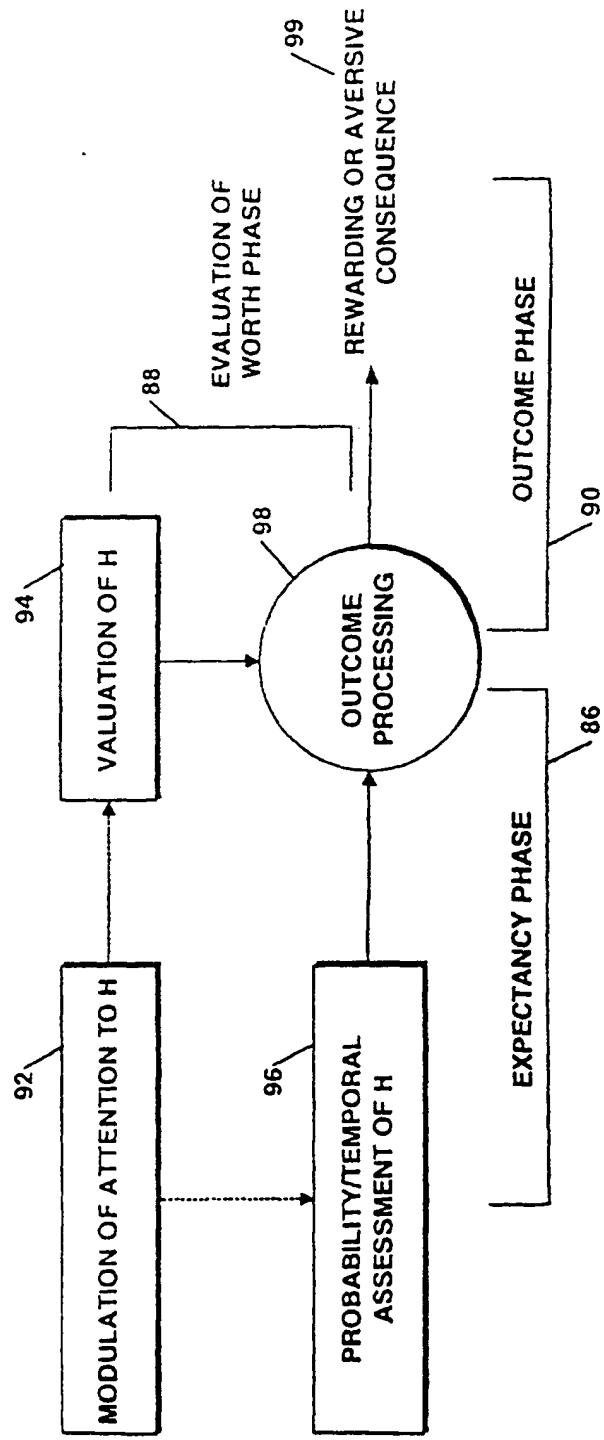
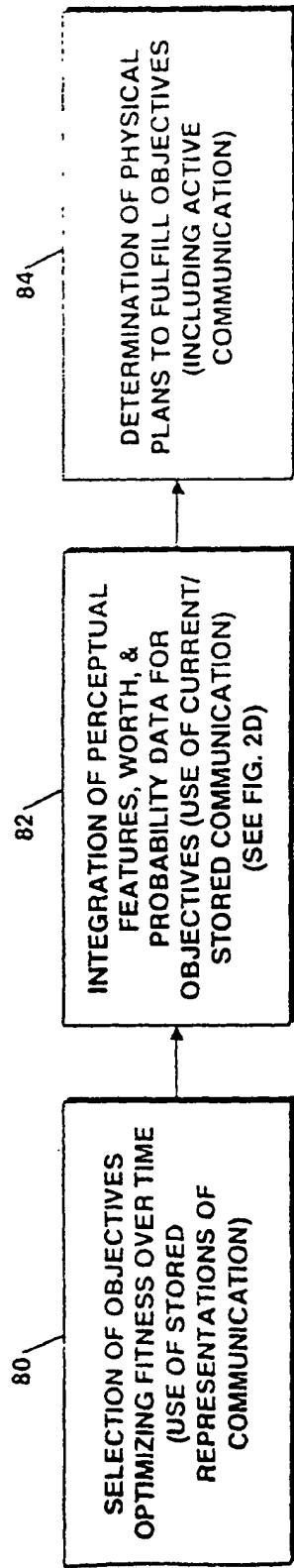


Figure 2D

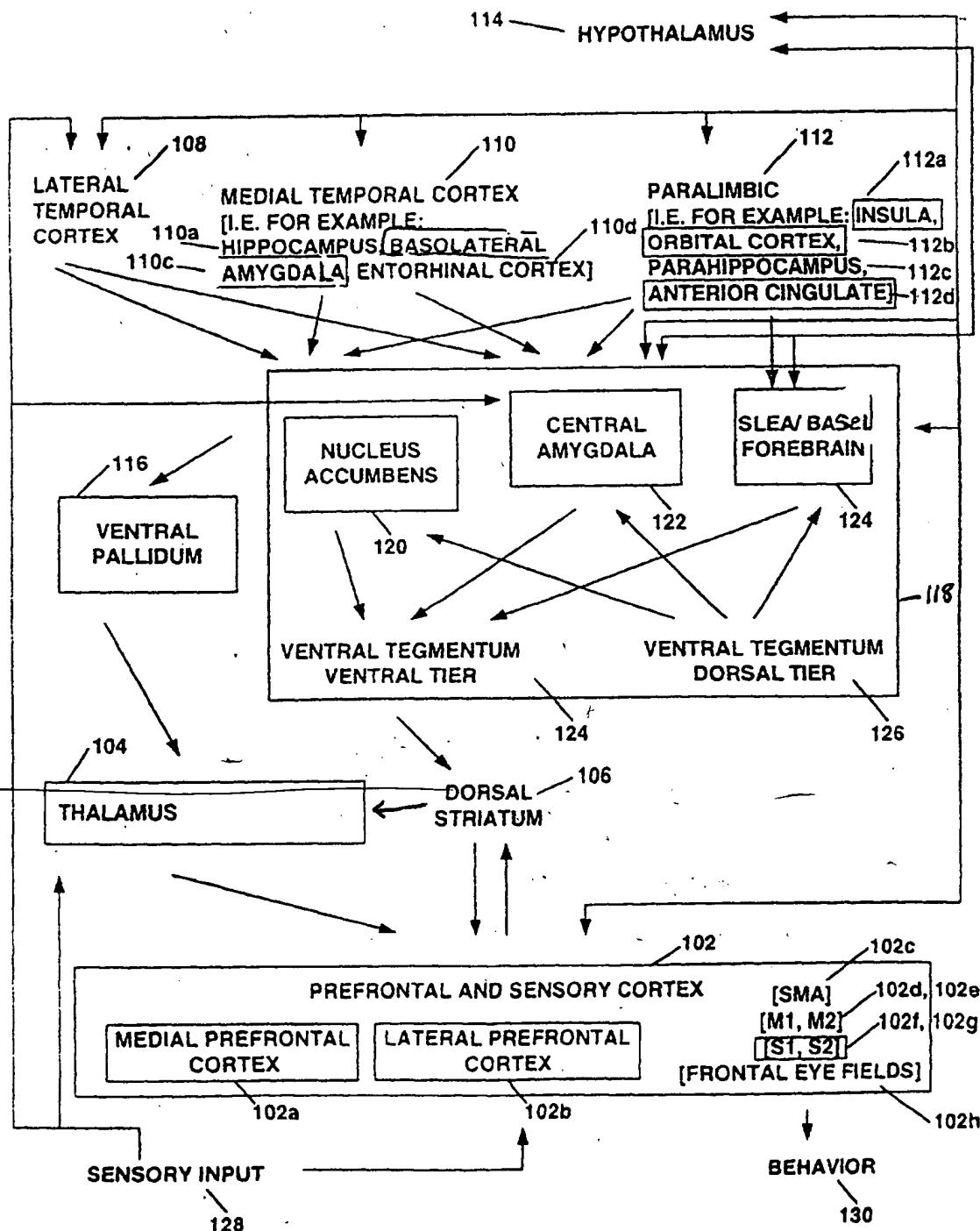
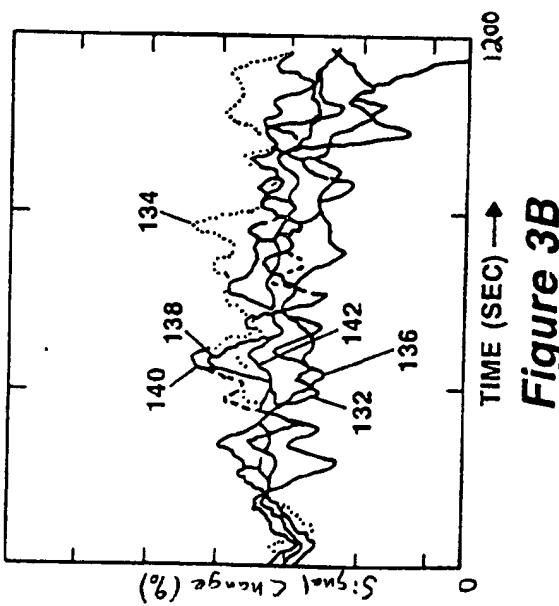
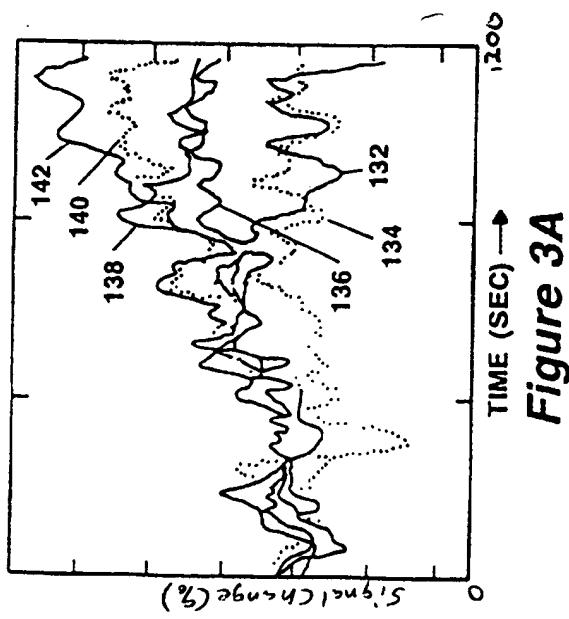
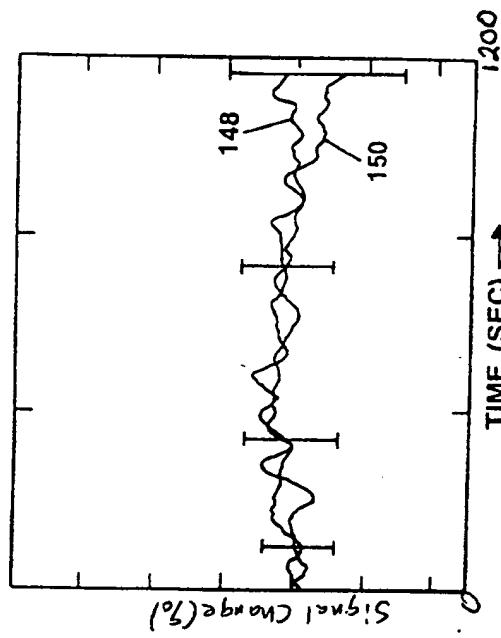
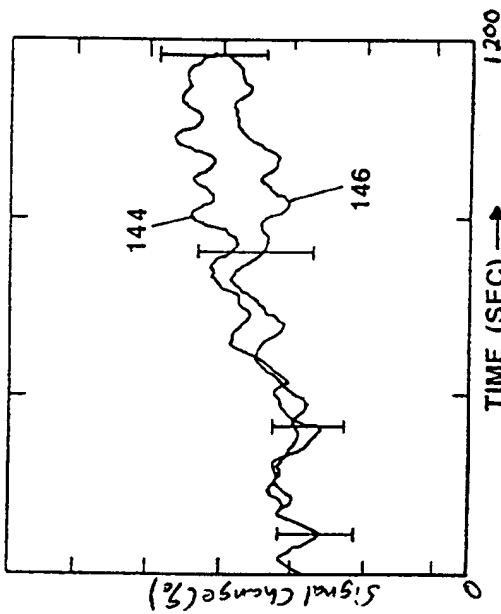


Figure 3



METHOD APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUE
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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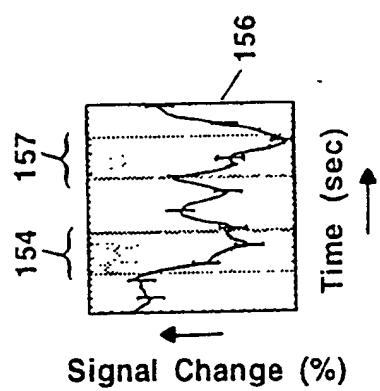


Figure 3F

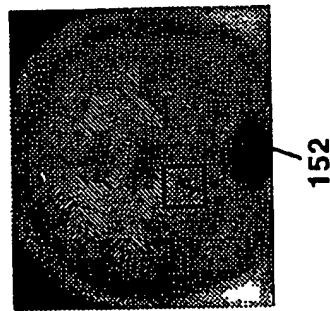
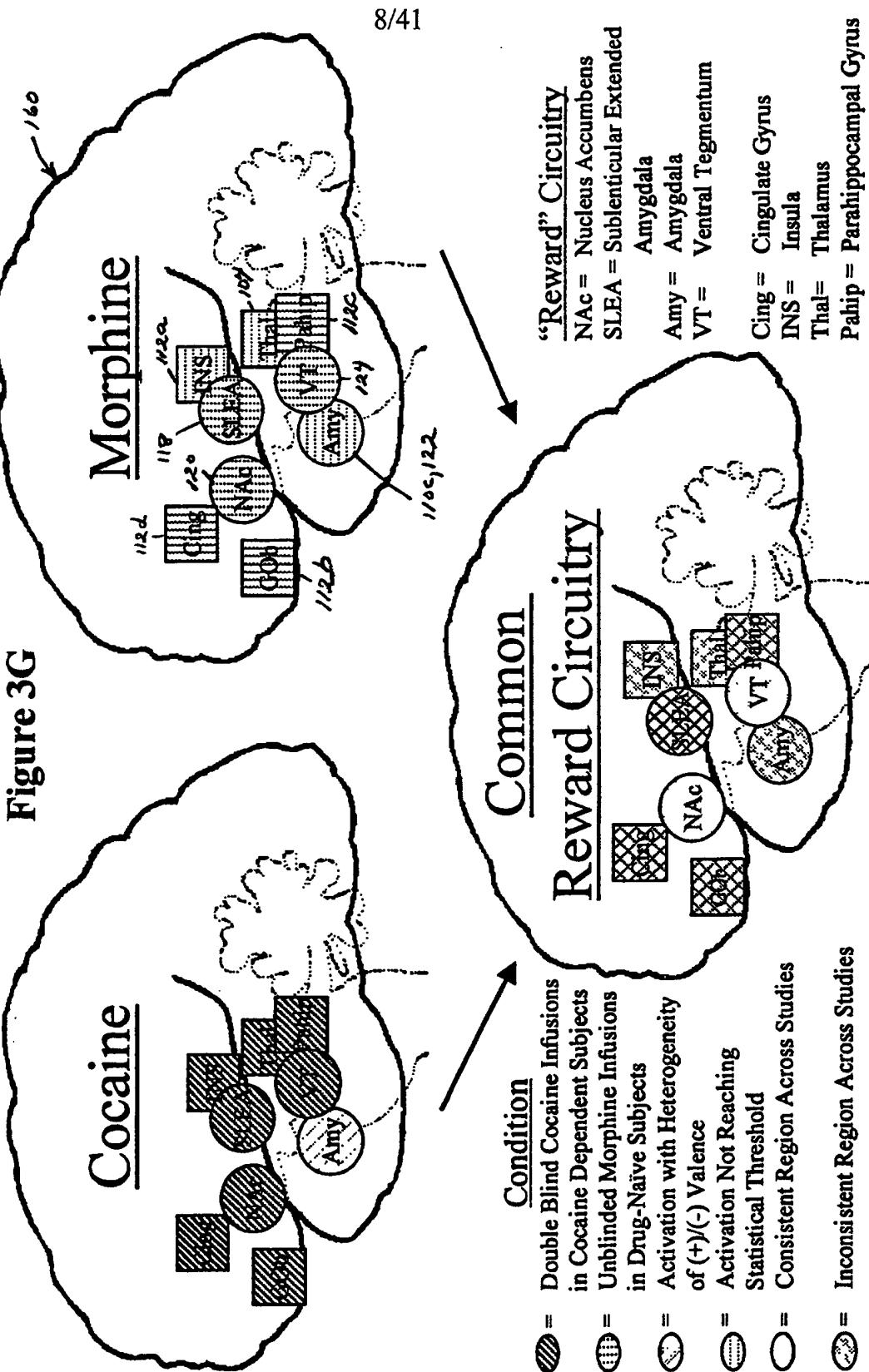


Figure 3E



METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

180
178
176
174
172
170

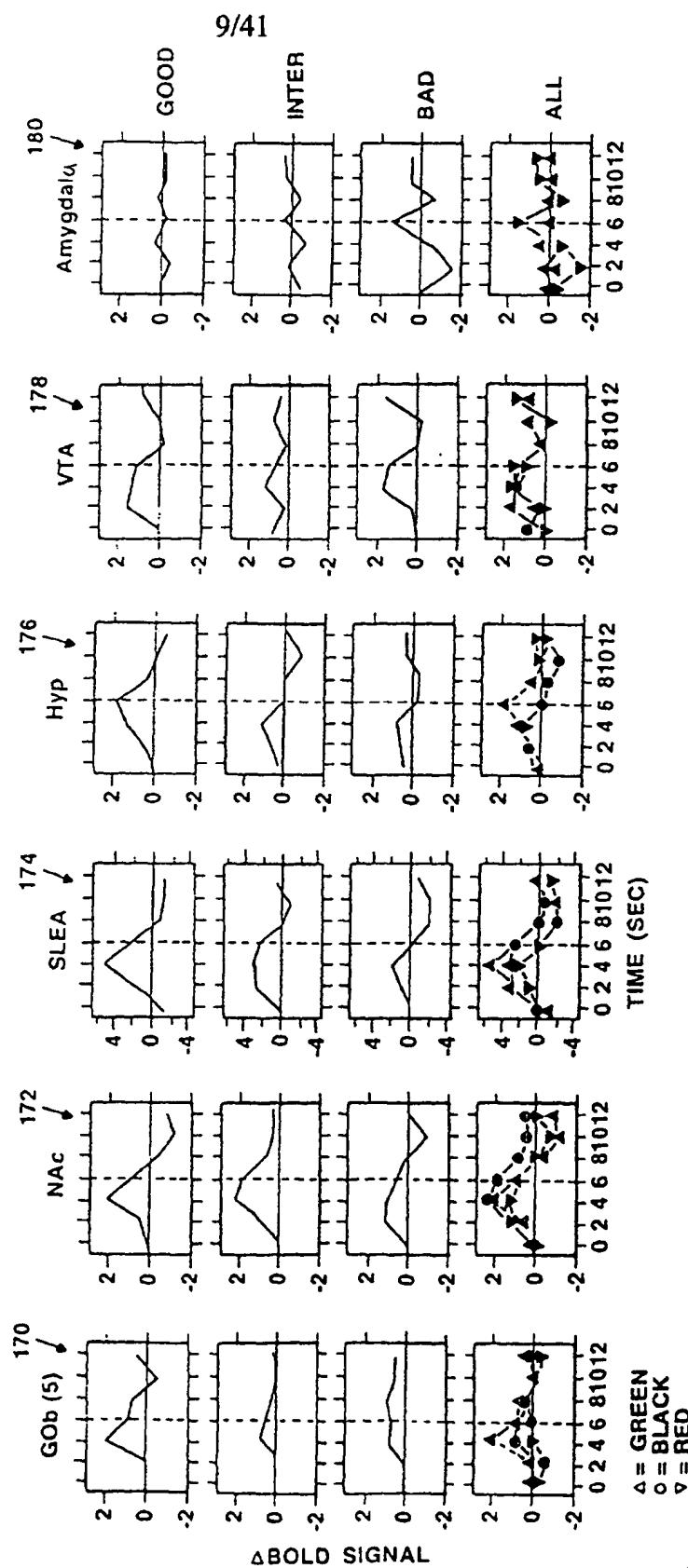


Figure 3H

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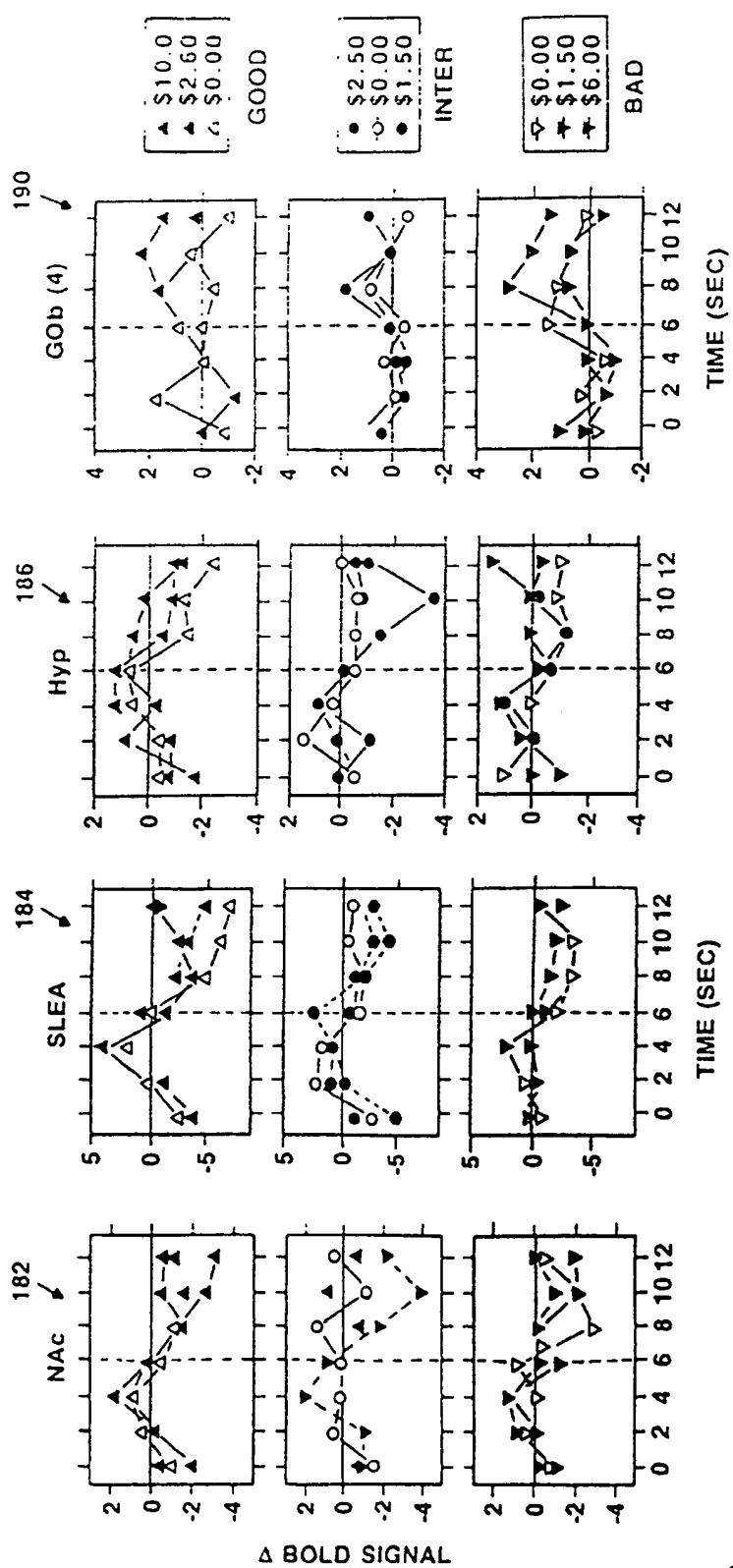


Figure 3I

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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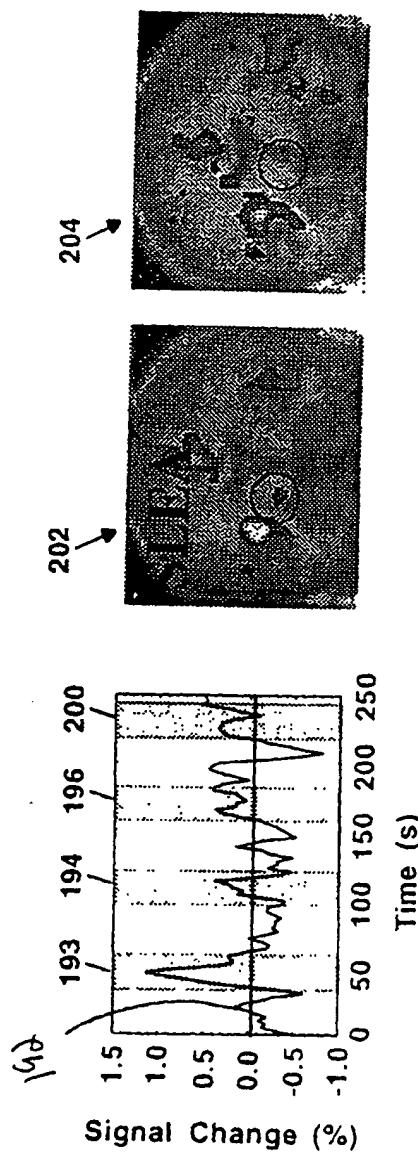


Figure 3K Figure 3L

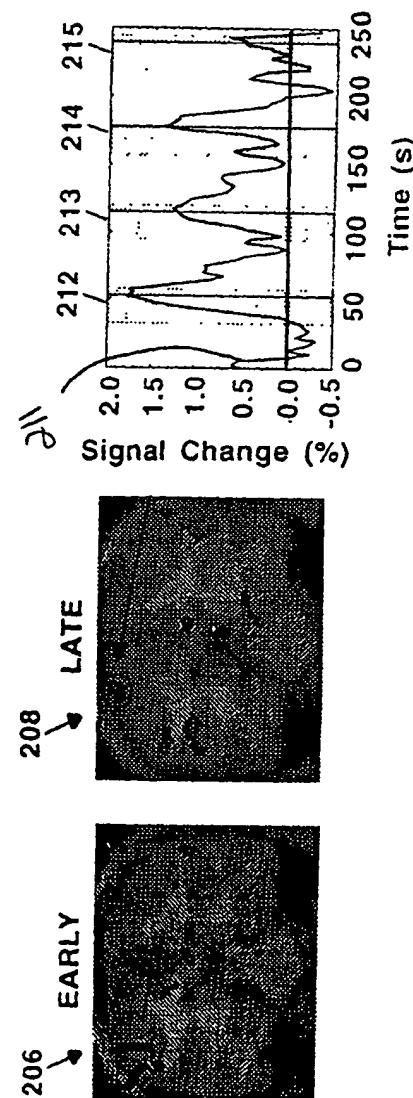


Figure 3M Figure 3N Figure 3O

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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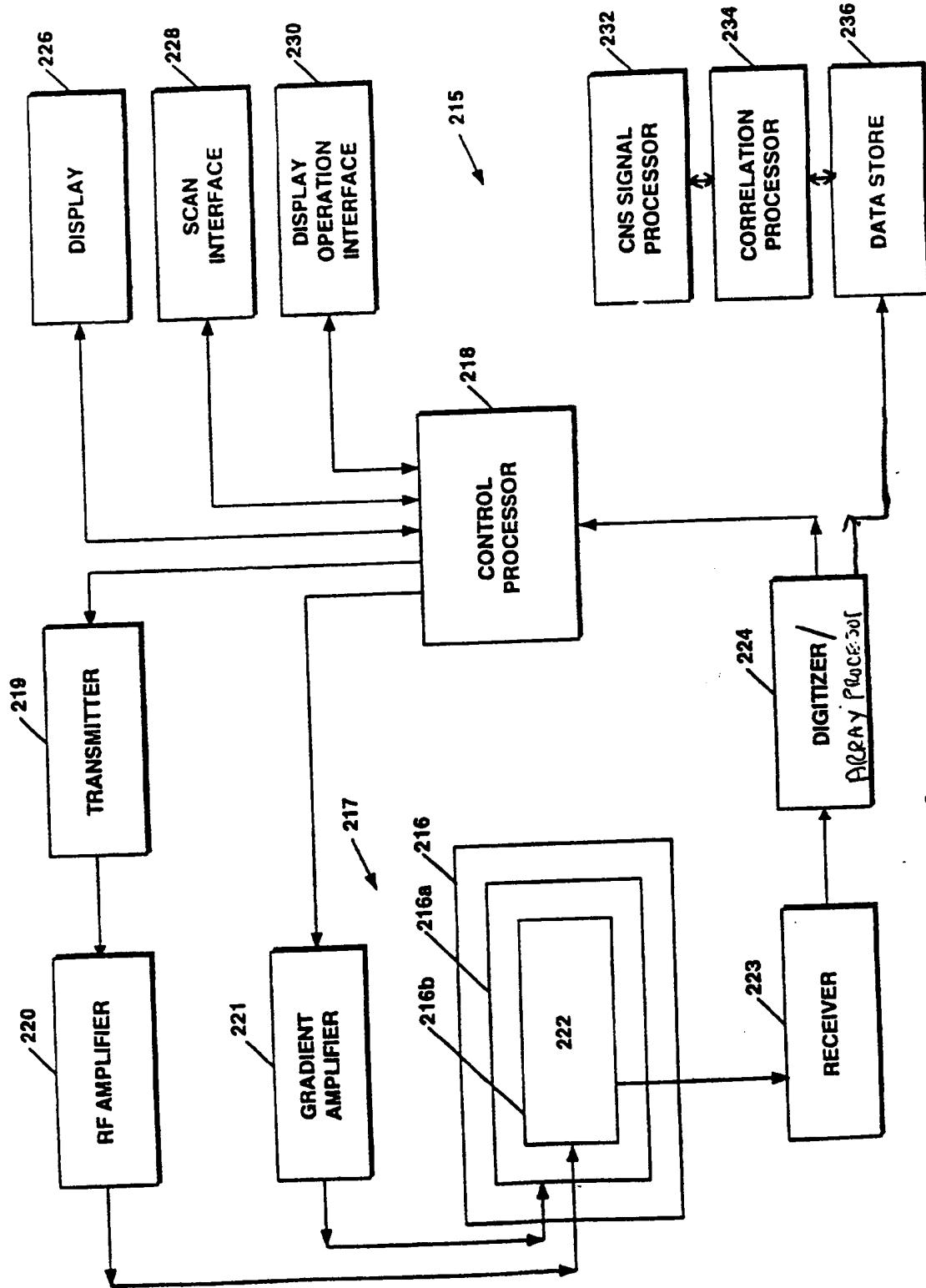


Figure 4

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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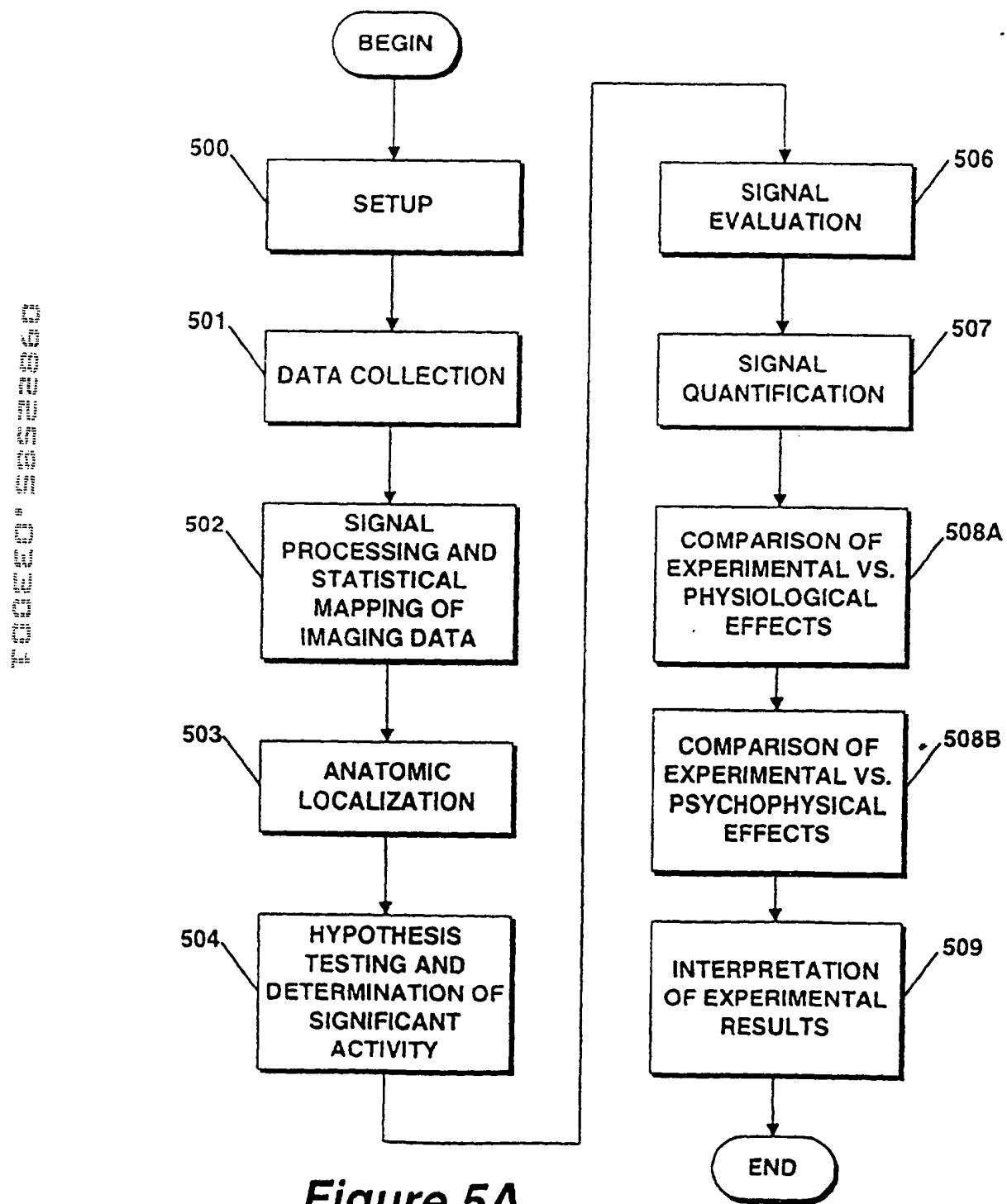


Figure 5A

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

Recentr. Et Al.

Case No. MGH-004BUS

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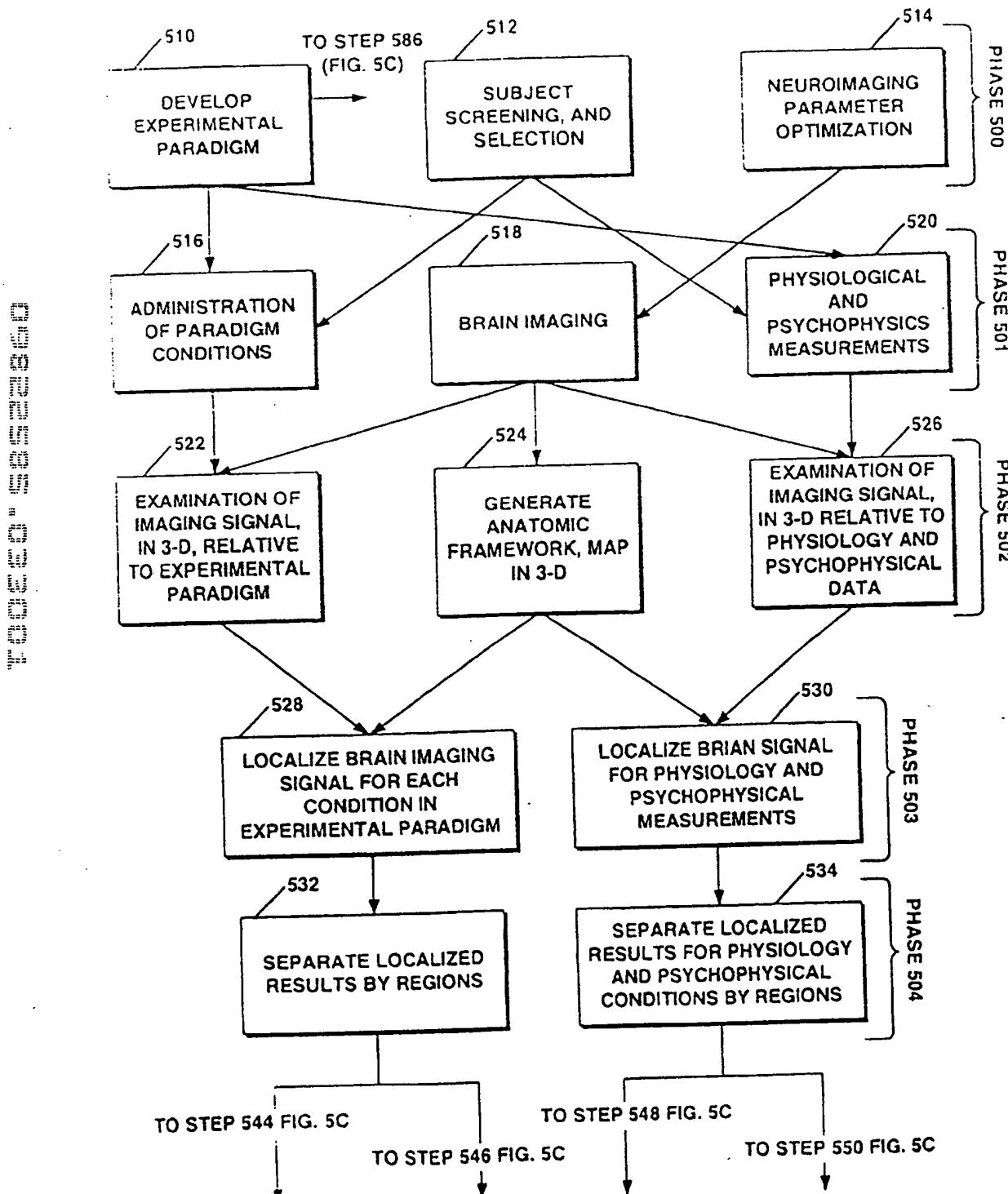


Figure 5B

METHOD APPARATUS FOR OBJECTIVELY MEASURE PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUE
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

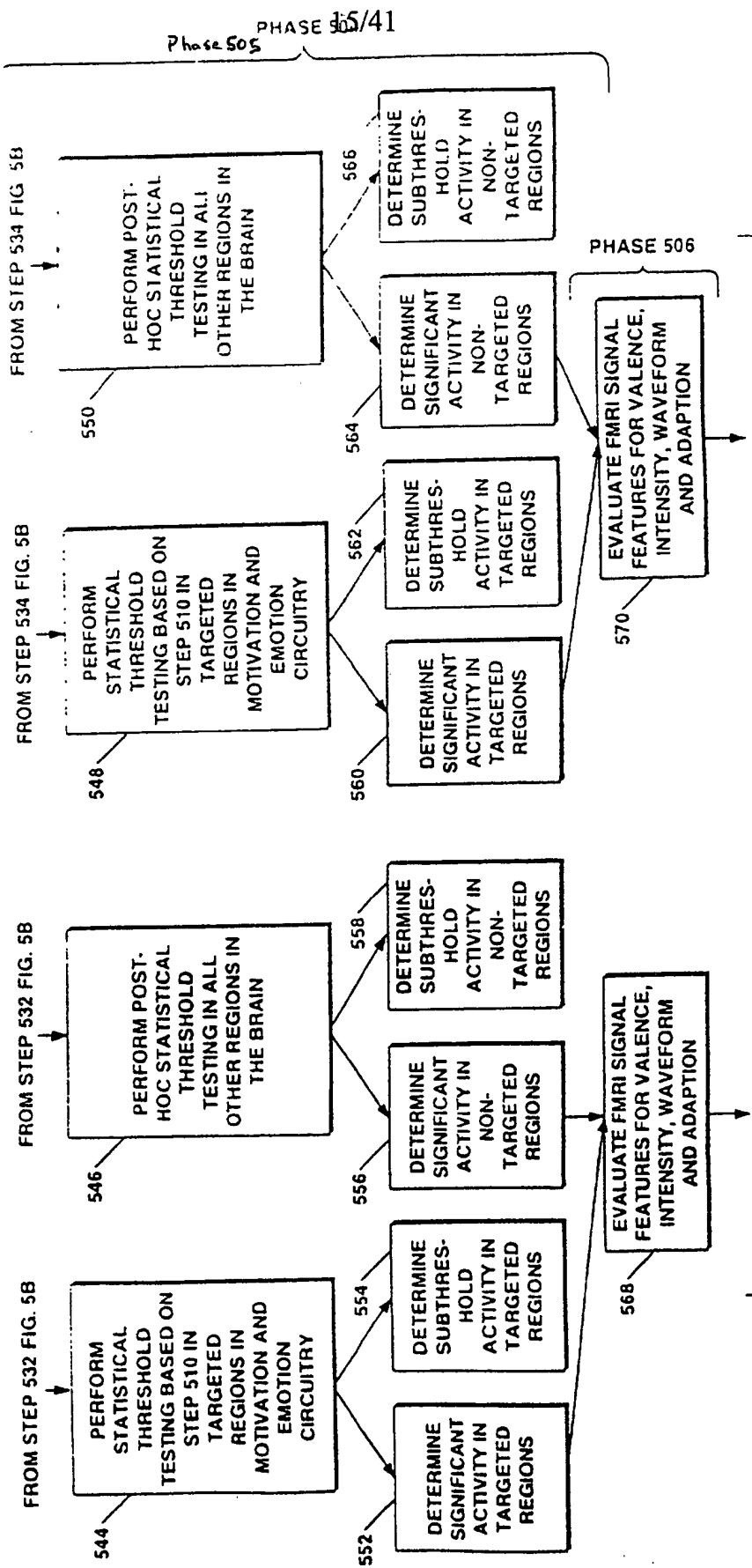


Figure 5C

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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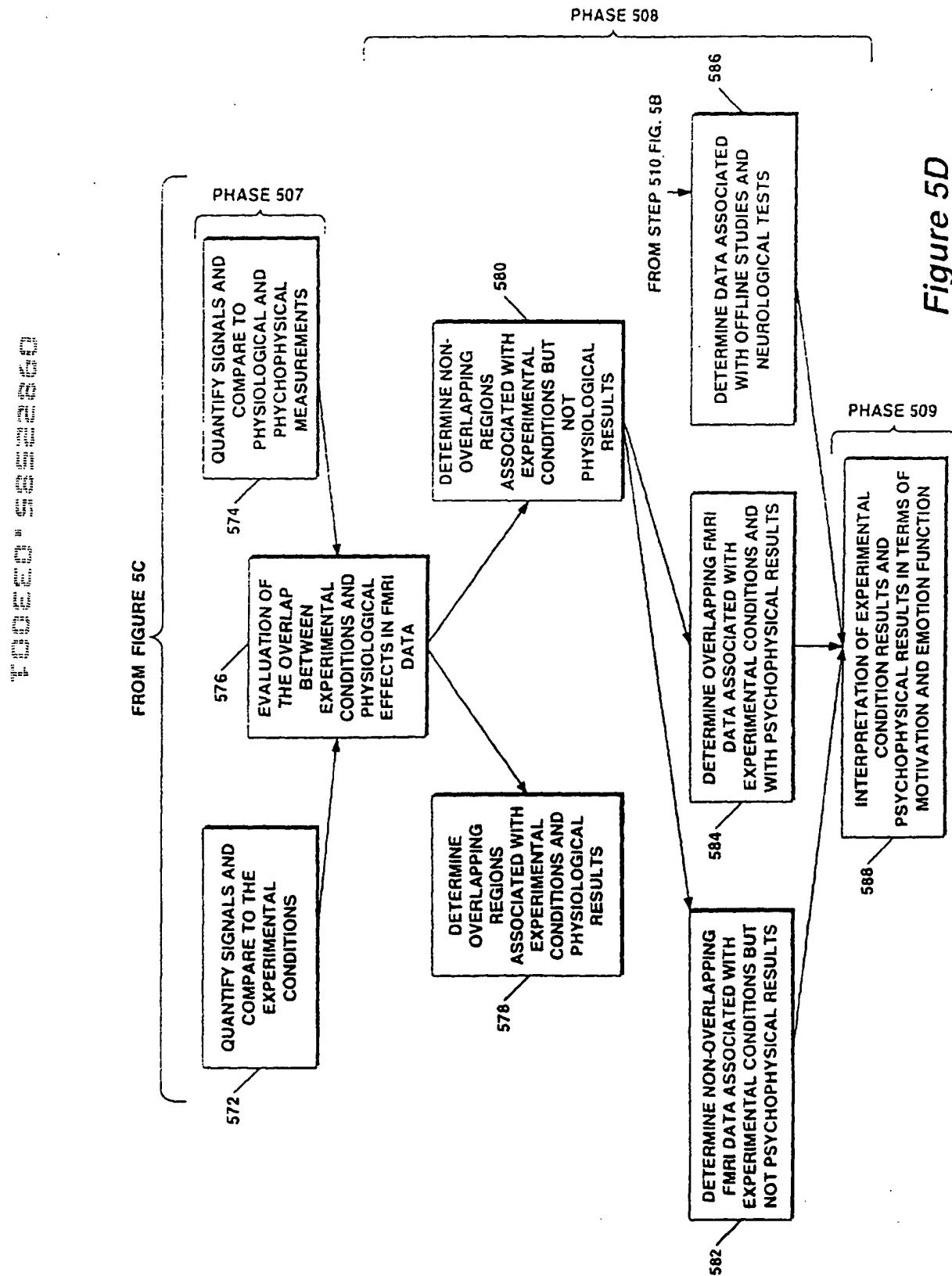


Figure 5D

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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600 602 604 606 608 610 612 614 616 618

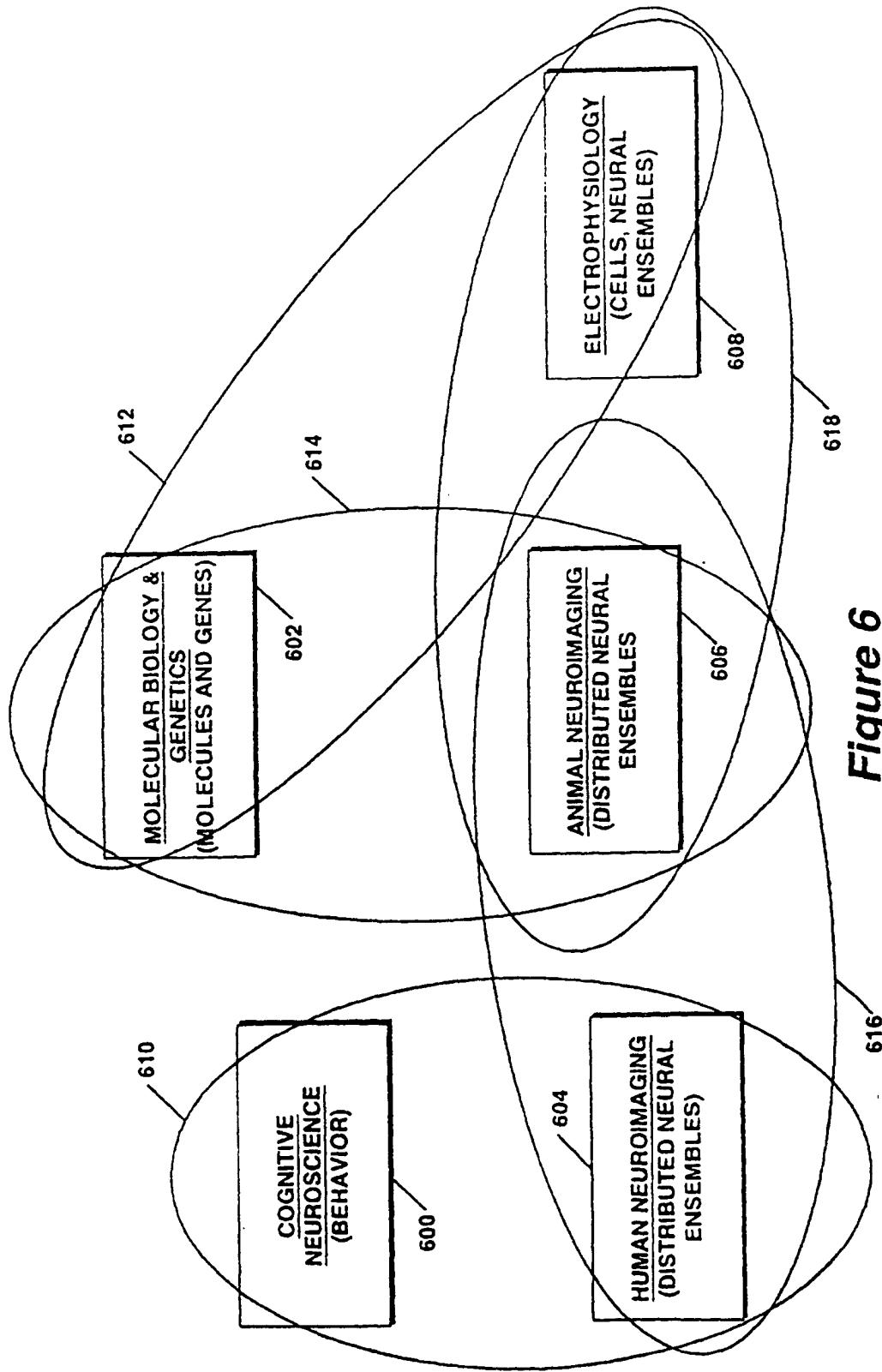


Figure 6

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

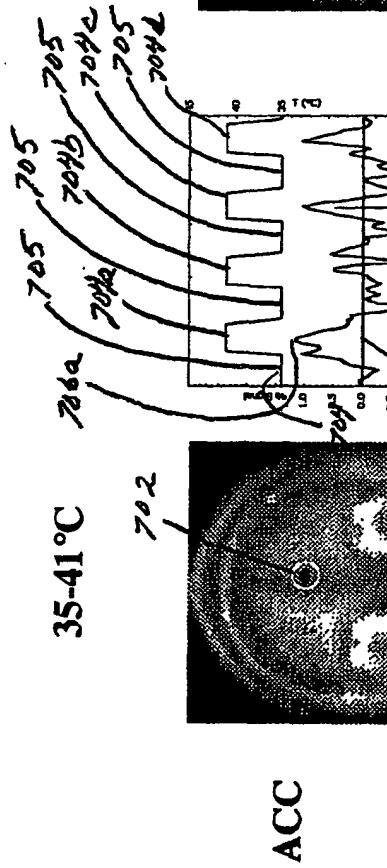


FIG. 7B

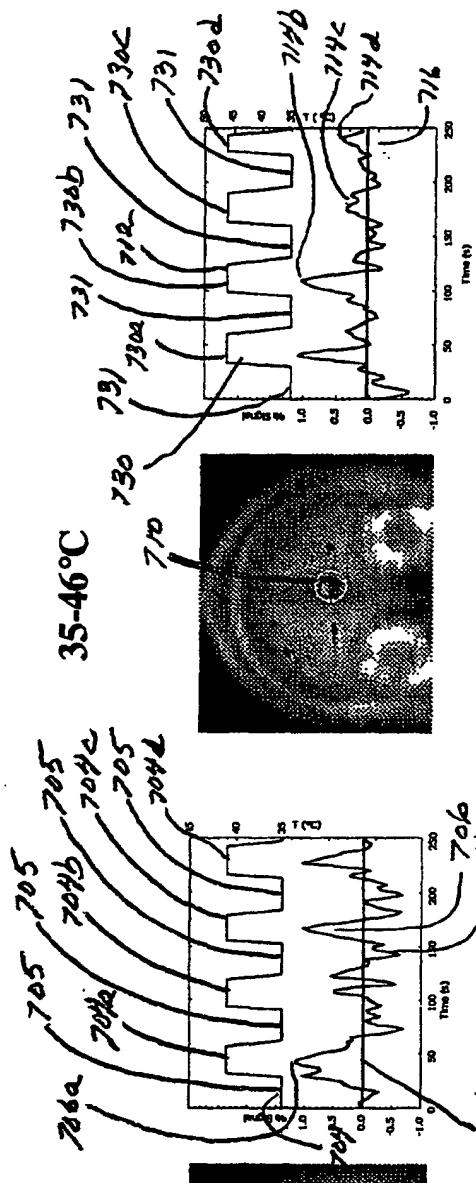


FIG. 7C

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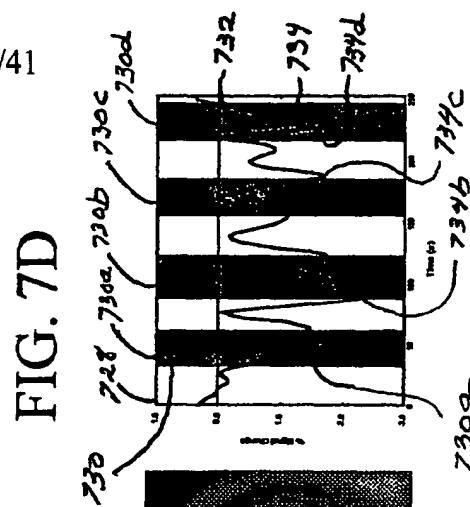


FIG. 7D



FIG. 7E

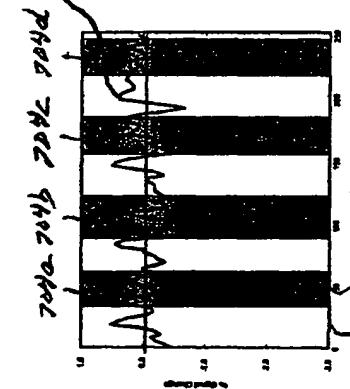


FIG. 7F

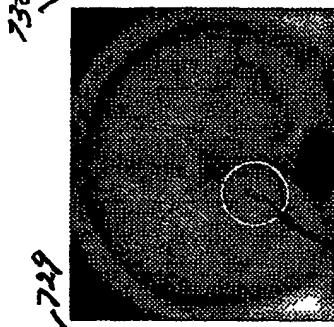


FIG. 7G

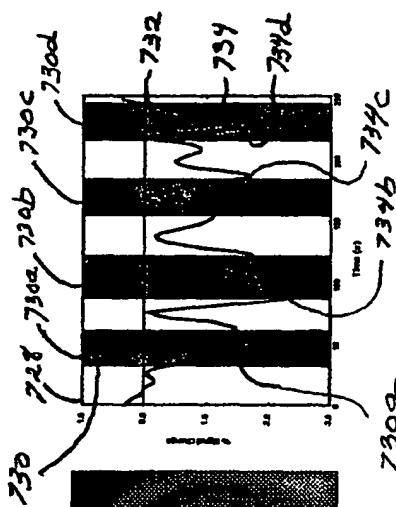


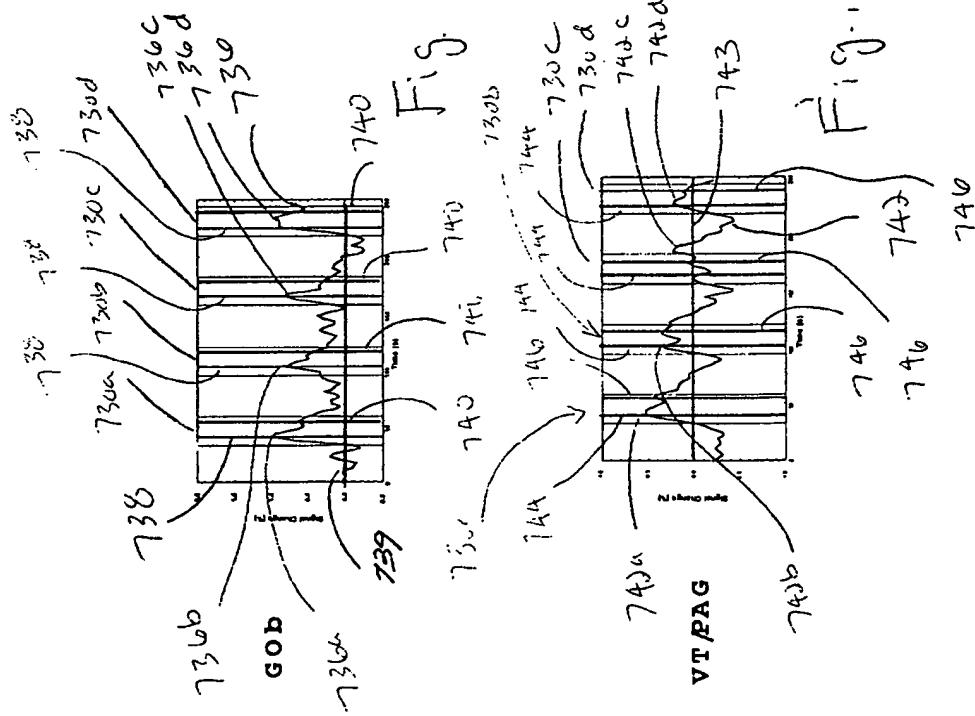
FIG. 7H

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

MGH-004BU

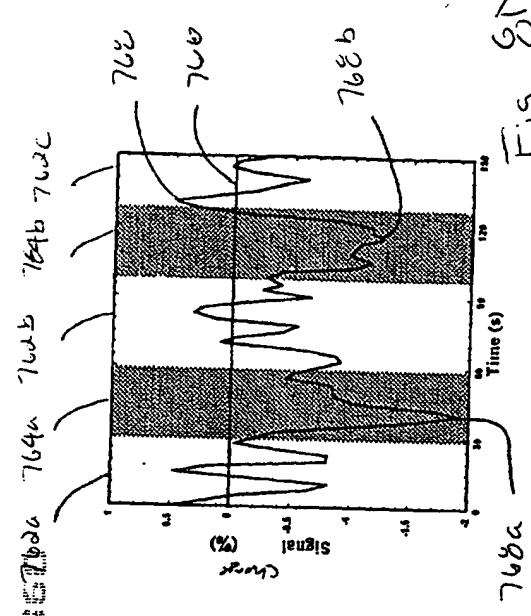
CASE NO. MGH-004BUS

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METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS



35-41°C

760

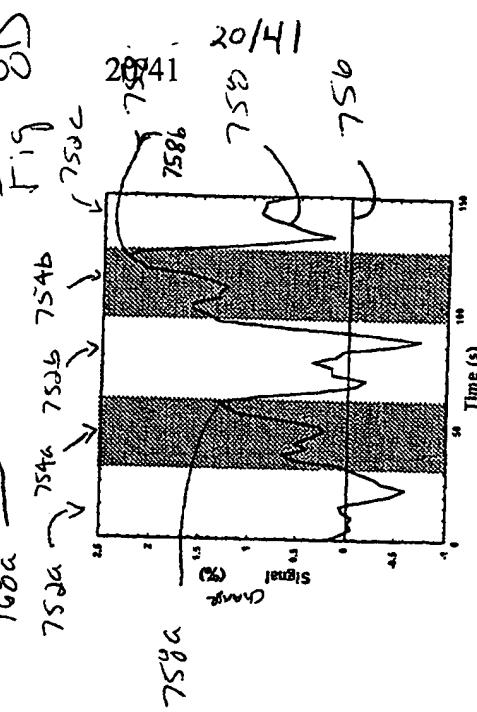


Figure 8C

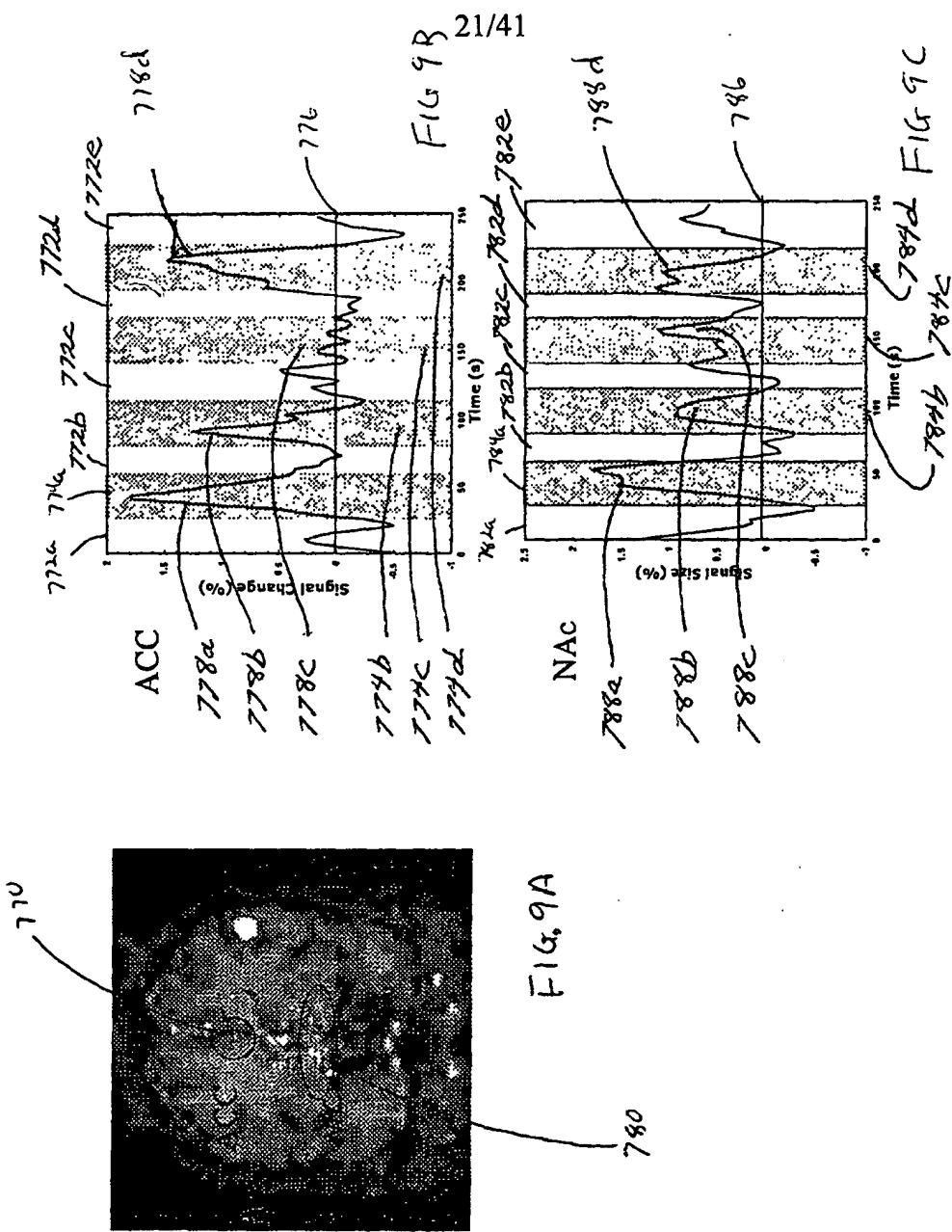


Figure 8A

Figure 8B

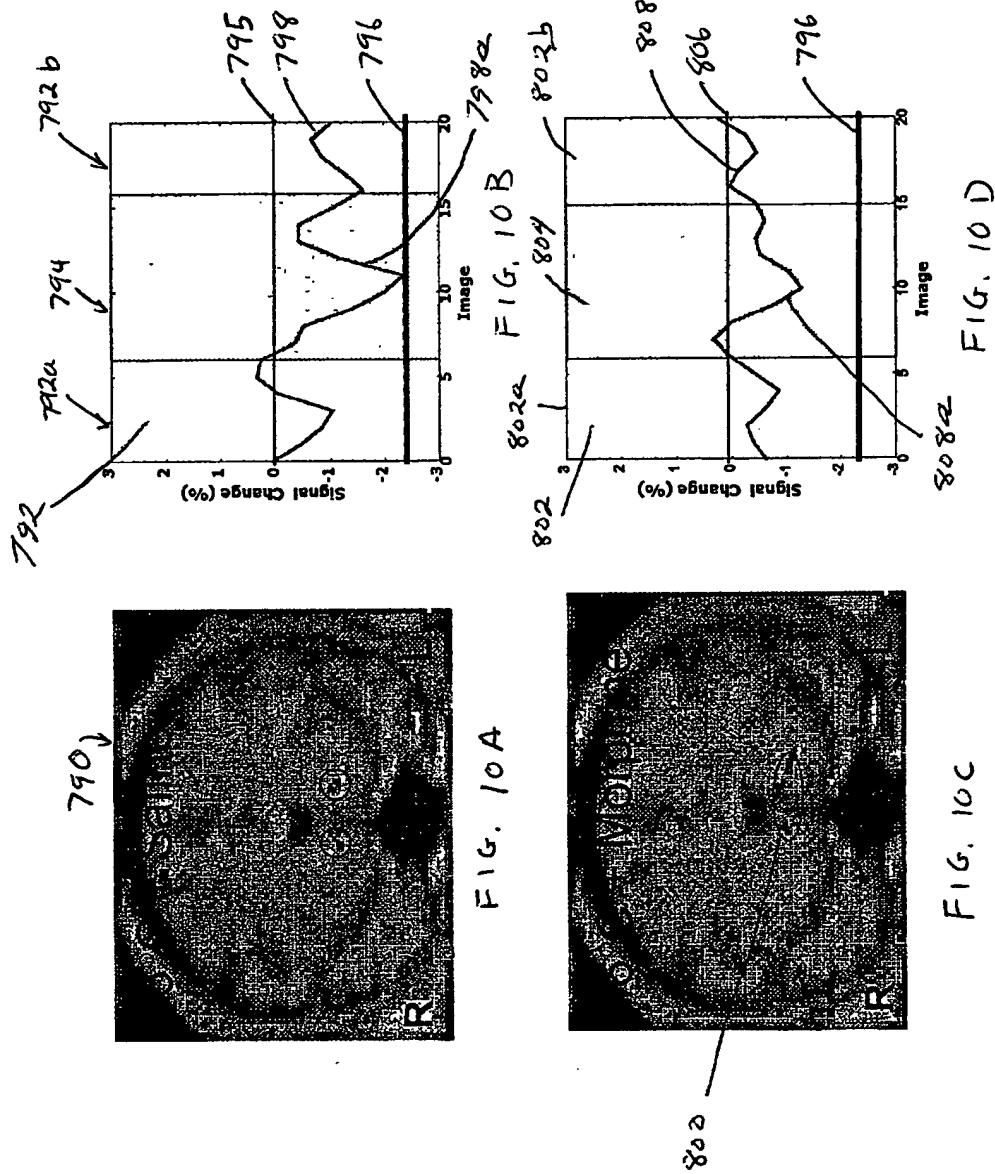
METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS



METHODS APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
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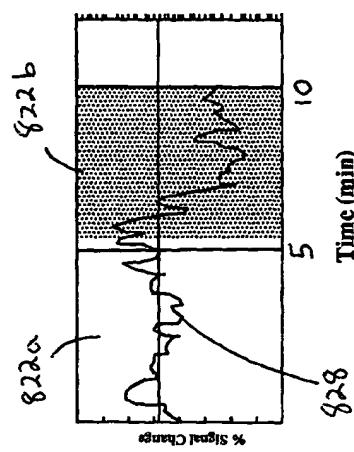


FIG. 10F

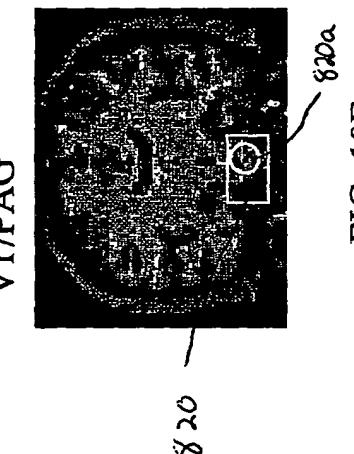


FIG. 10E

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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Case No. 004BUS

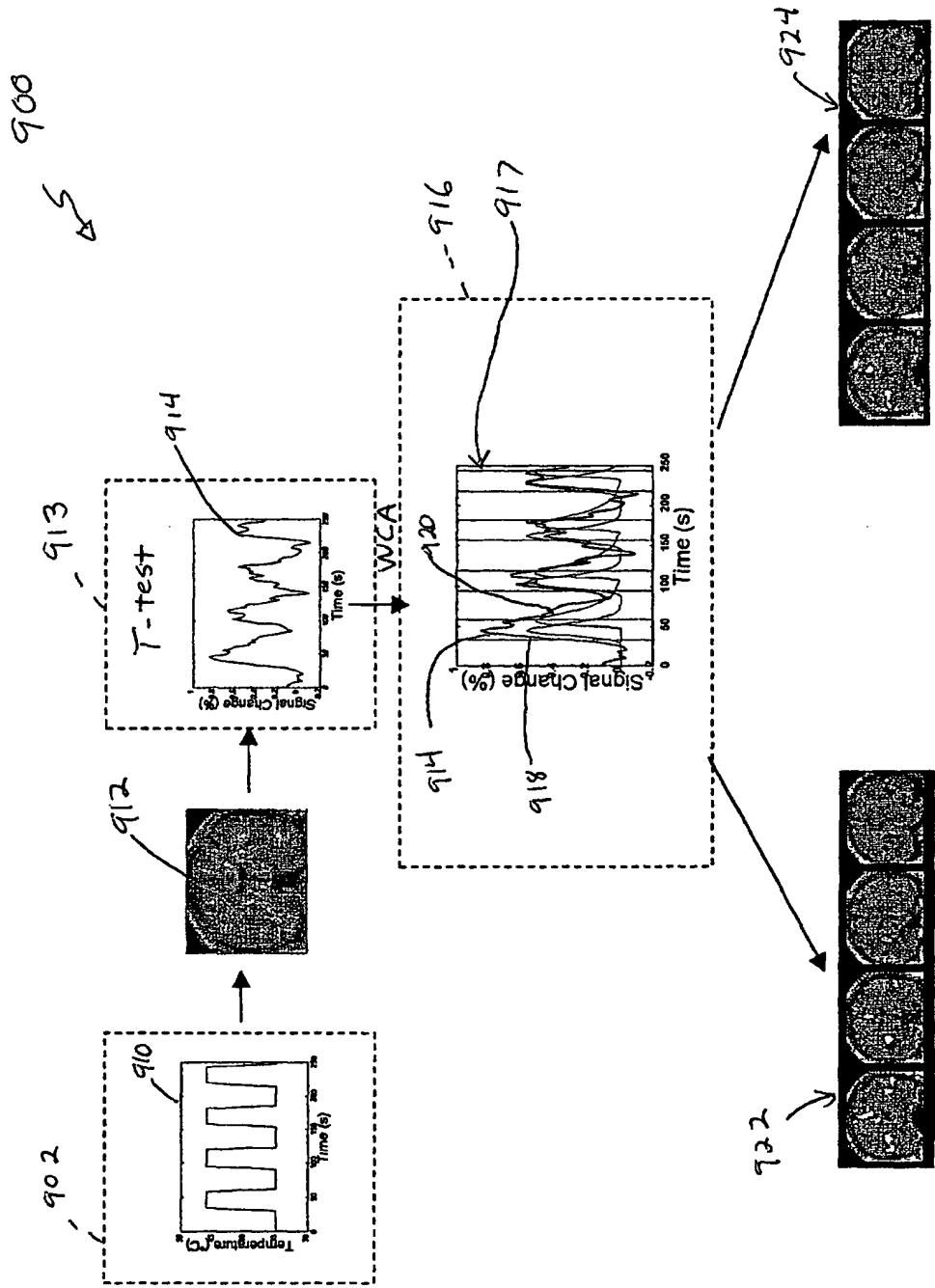


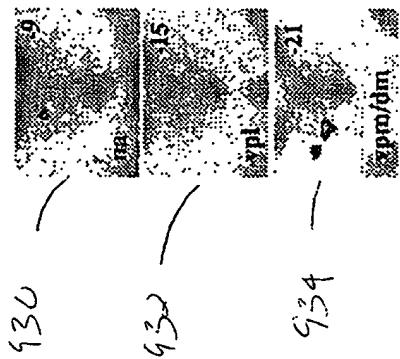
Figure 11

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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FIG 11 A

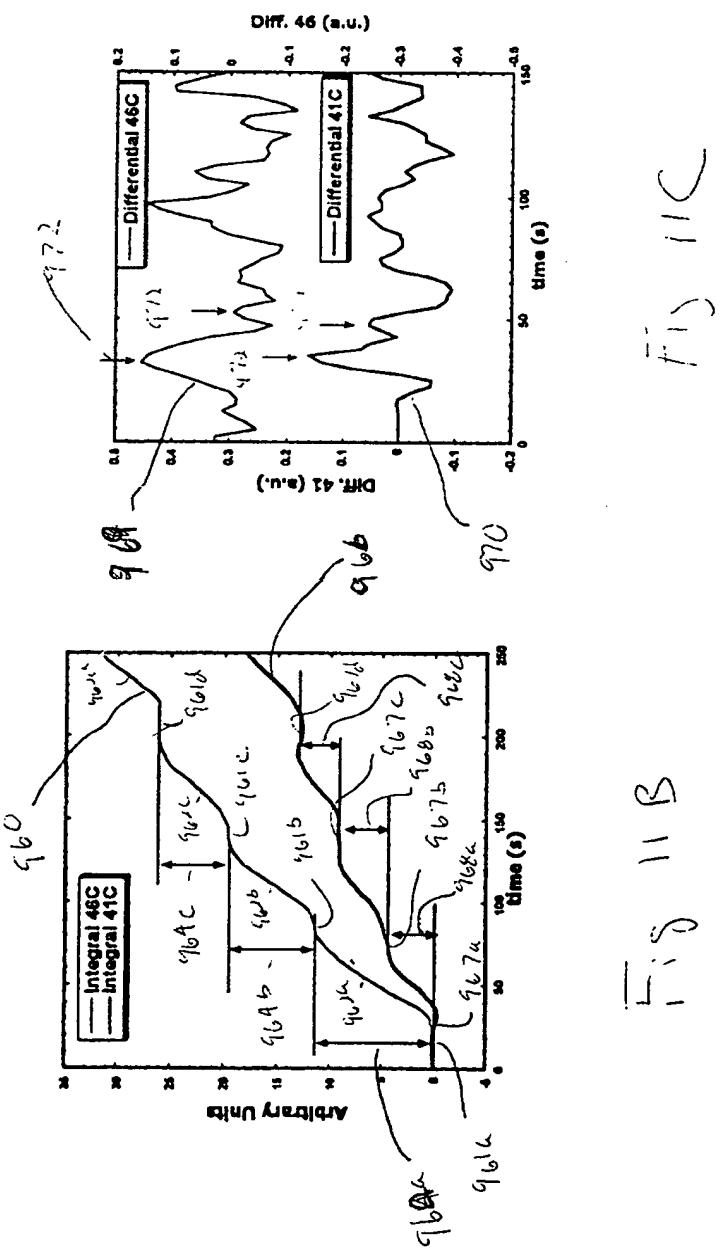


METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

Recetta, Et Al.

CASE NO. MGH-004BUS

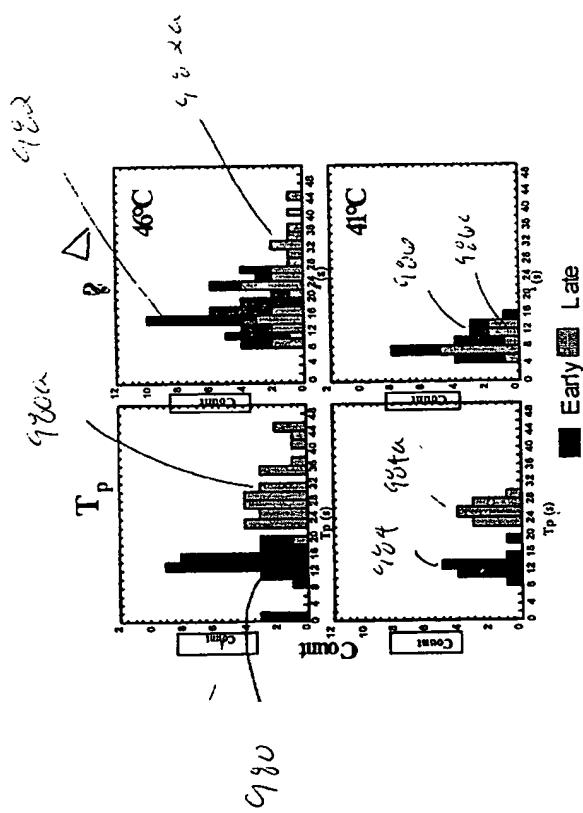
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METHODS APPARATUS FOR OBJECTIVELY MEASURE PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUE
Lino Becerra, Et Al.
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Figure 11D



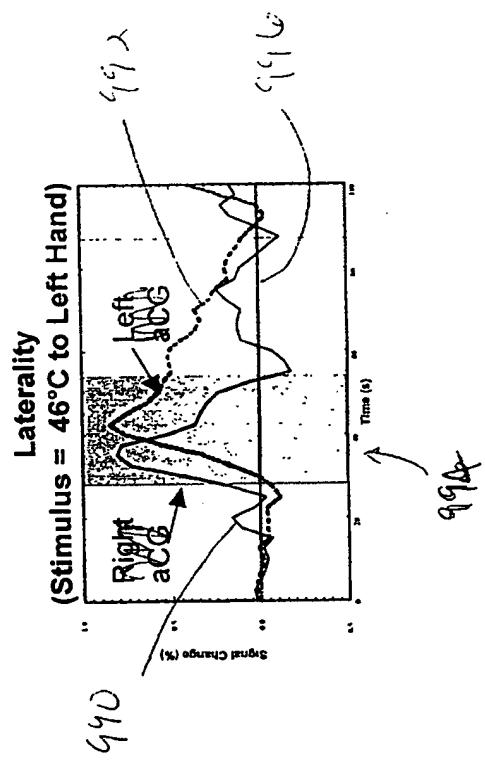


Figure 11 E

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009922222222 - 02220004

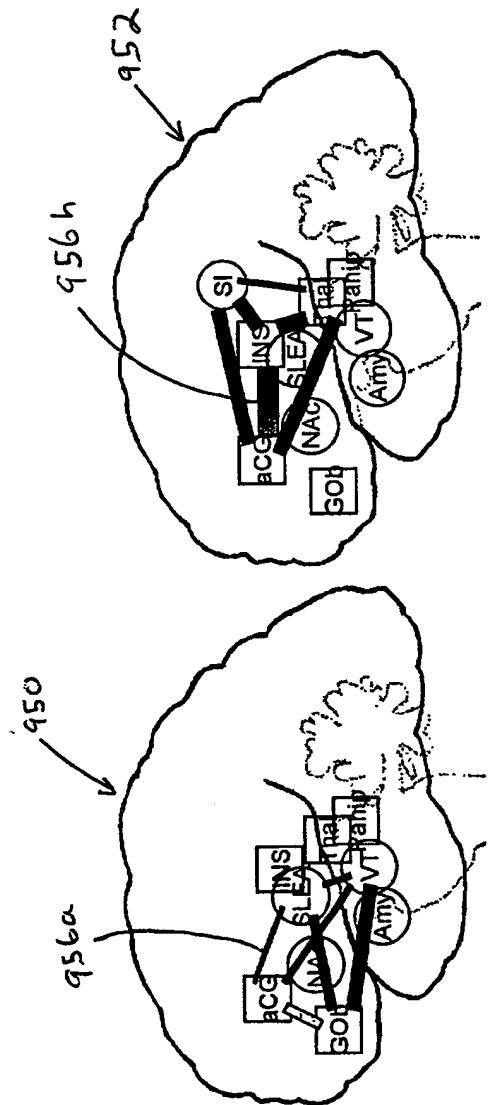


FIG. 11F

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN-TREATMENT AND OTHER RELATED TECHNIQUES

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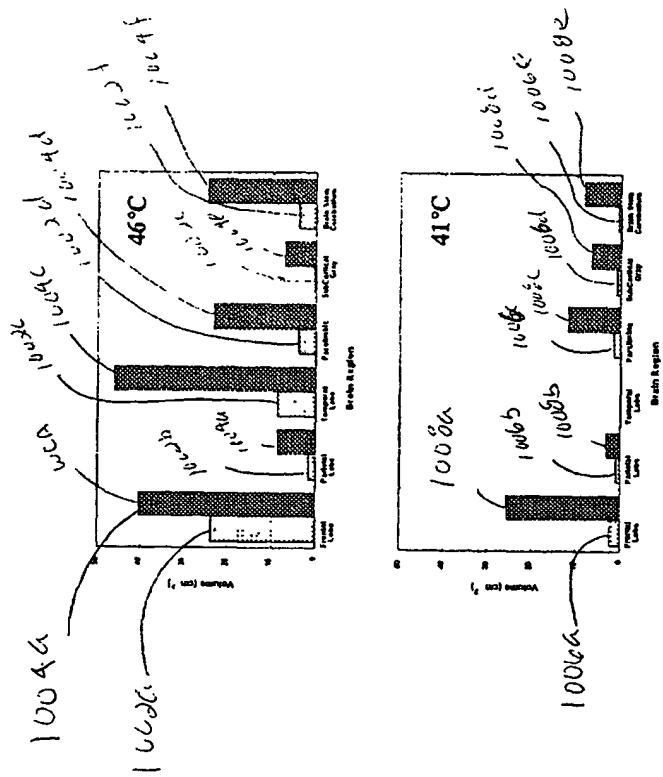
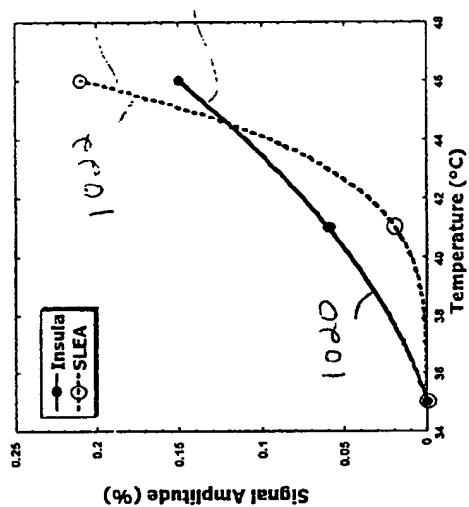


Figure 11 (c)

METHOD APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
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Figure 11 H



METHODS APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
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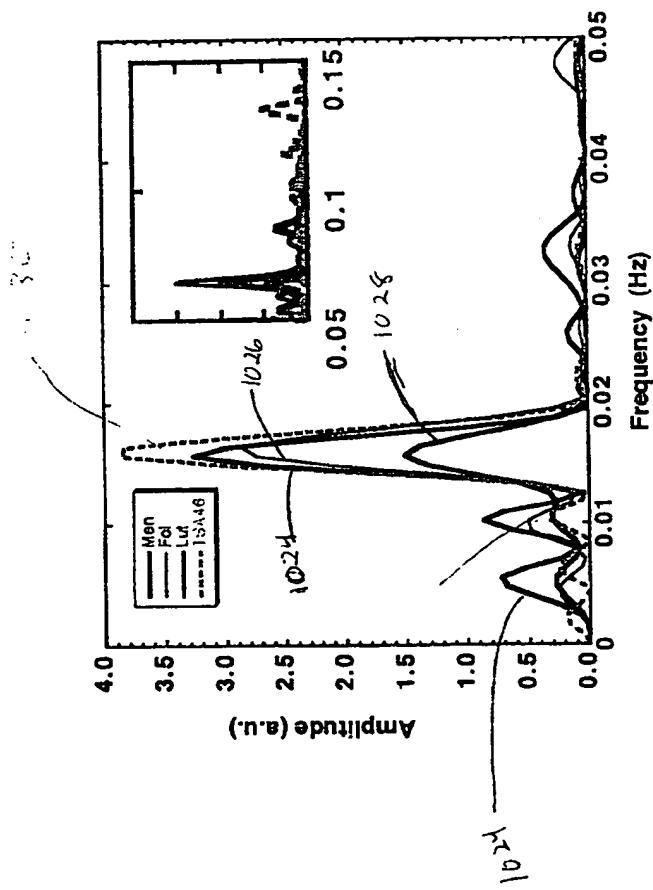


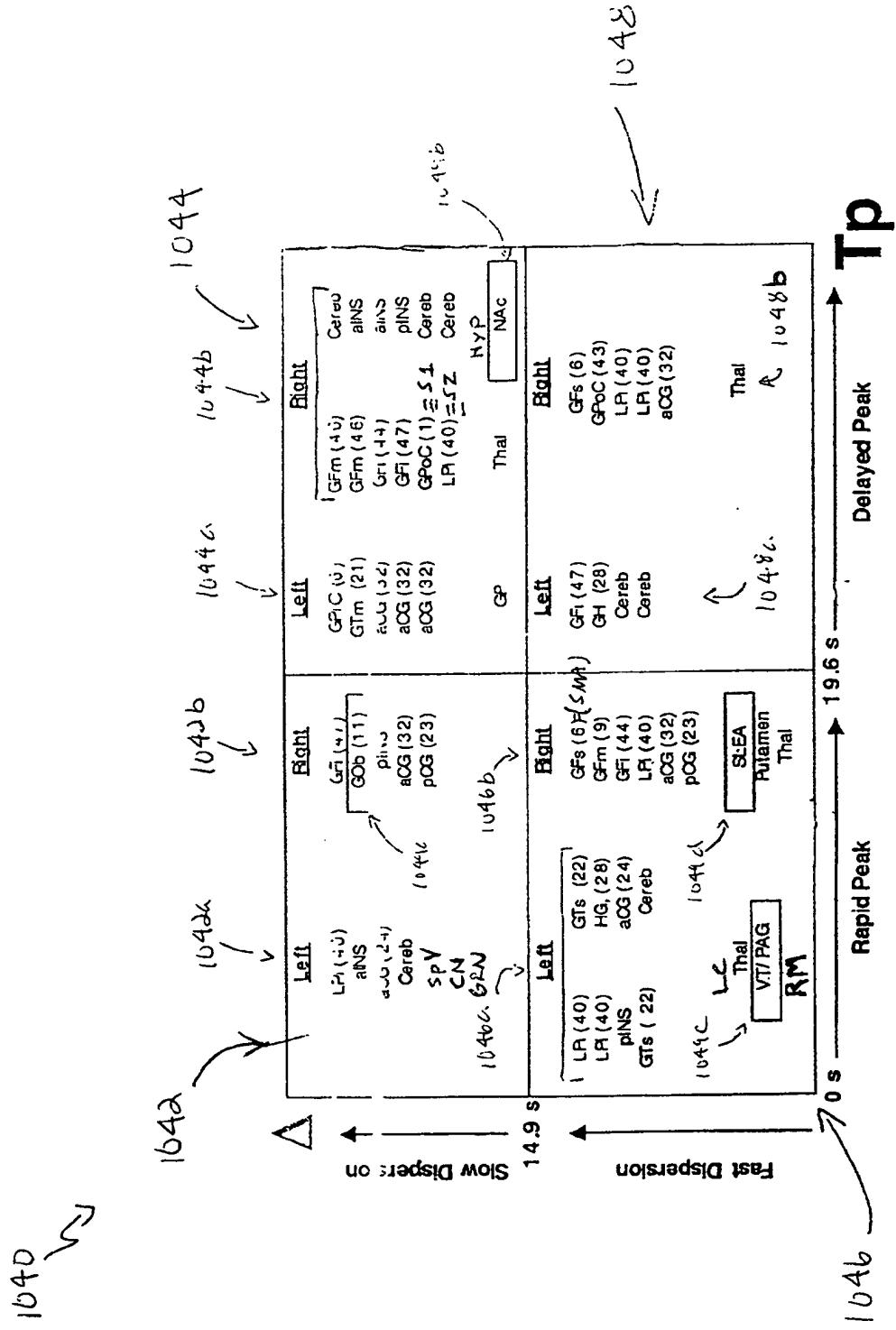
Figure 11

METHODS APPARATUS FOR OBJECTIVELY MEASURE PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUE
Lino Becerra, Et Al.
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PAIN TREATMENT AND OTHER RELATED TECHNIQUES
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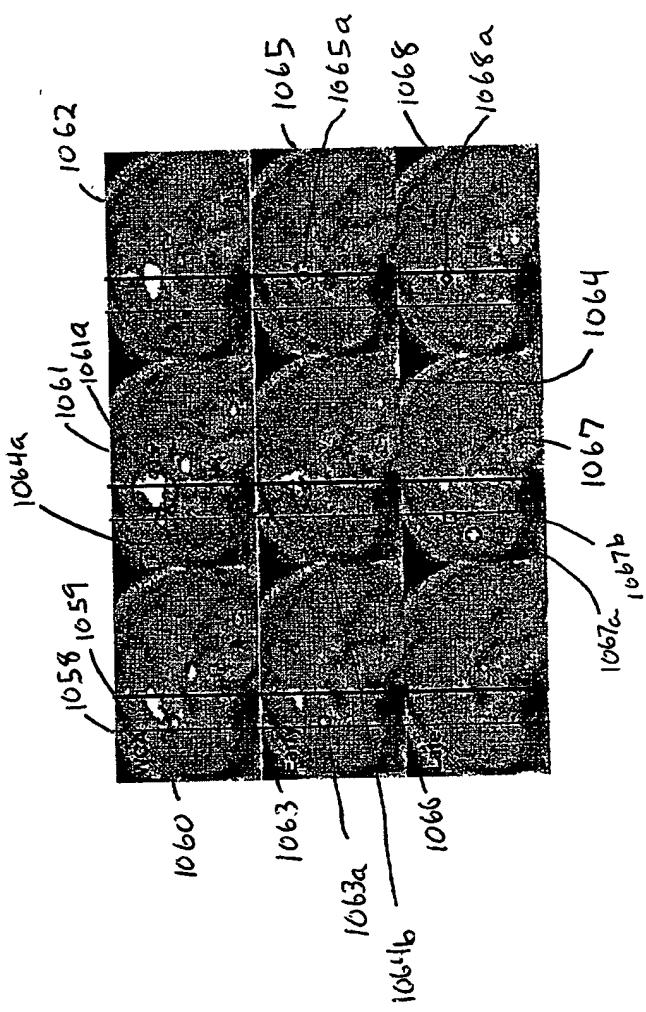


Figure 11K

METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
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FIG. 12A

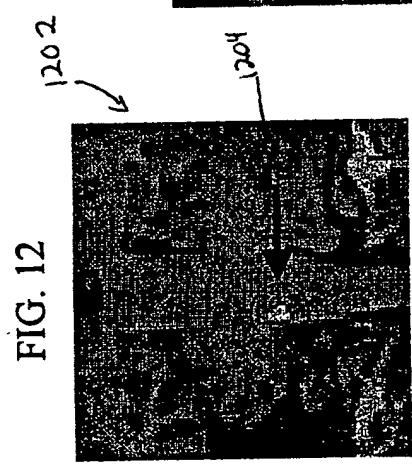


FIG. 12

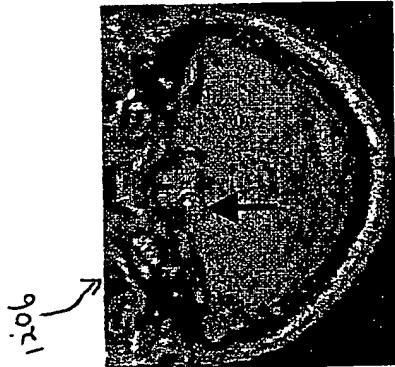
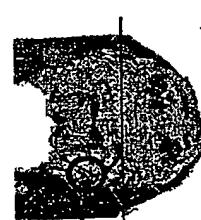


FIG. 12B

FIG. 12D



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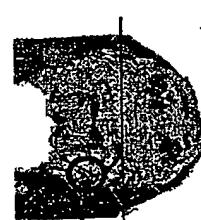


FIG. 12E

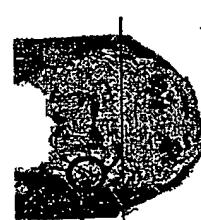


FIG. 12F

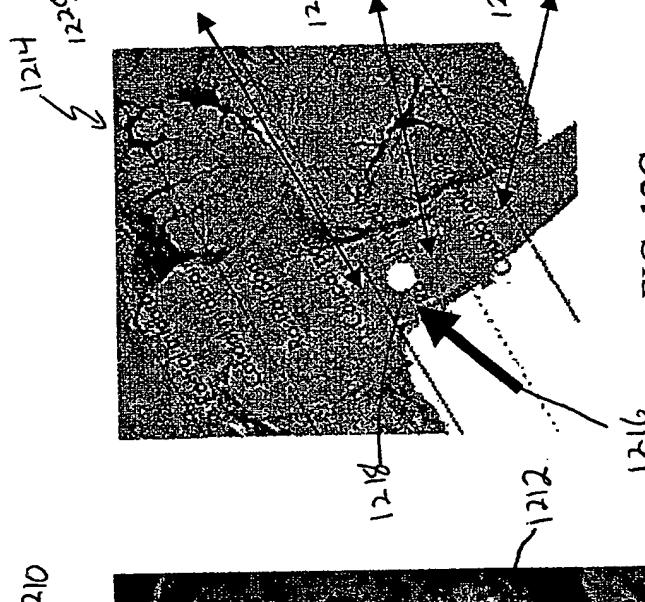


FIG. 12C



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FIG. 12E

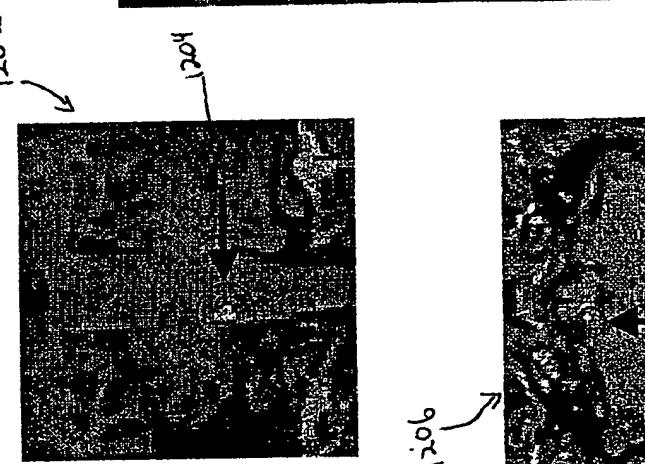


FIG. 12F

1208 FIG. 12A

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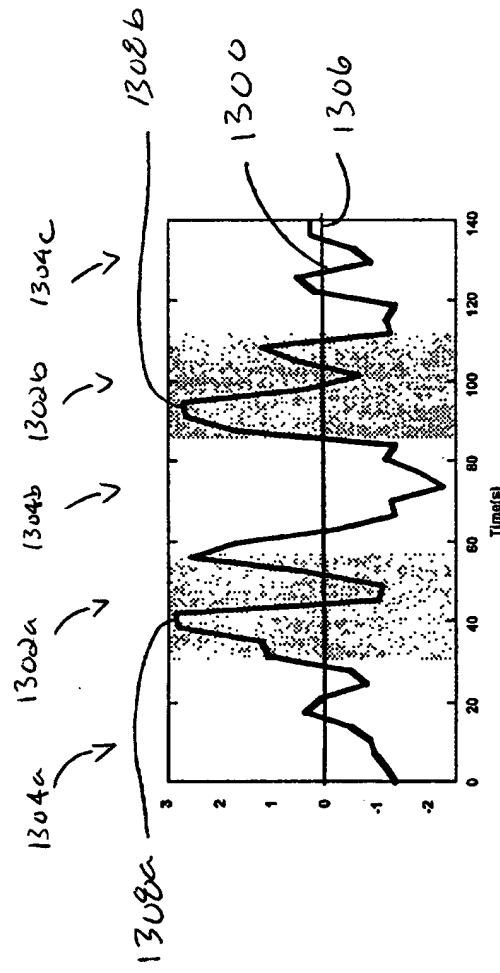


Fig 13

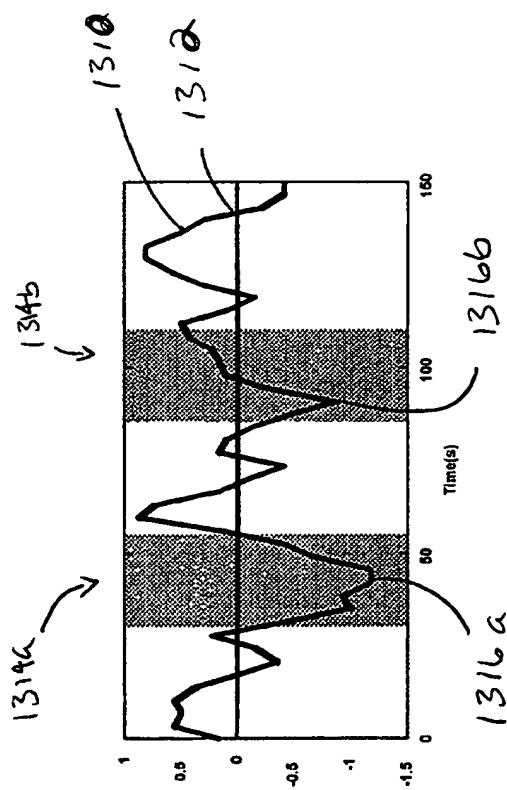


Fig 13A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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FIG. 14B

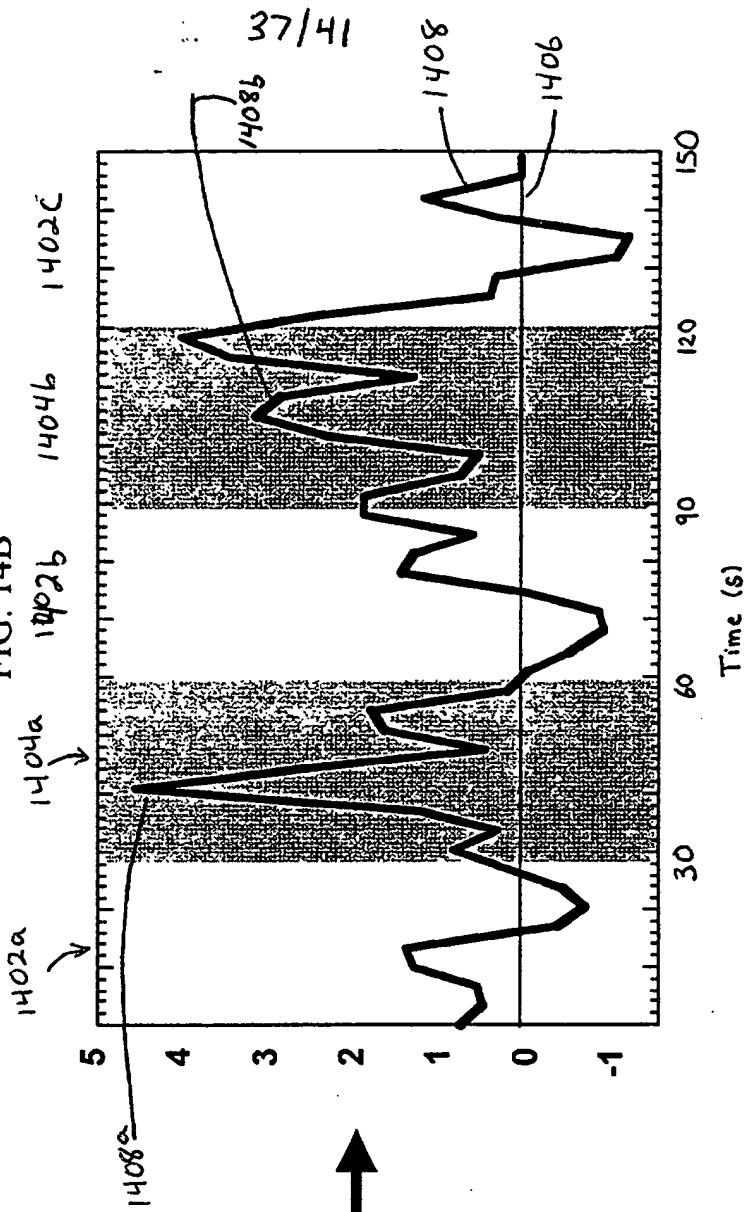
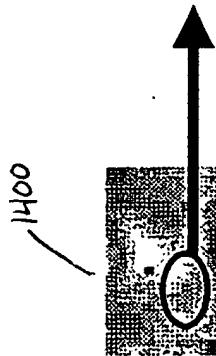


FIG. 14A



METHODS AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
Lino Becerra, Et Al.
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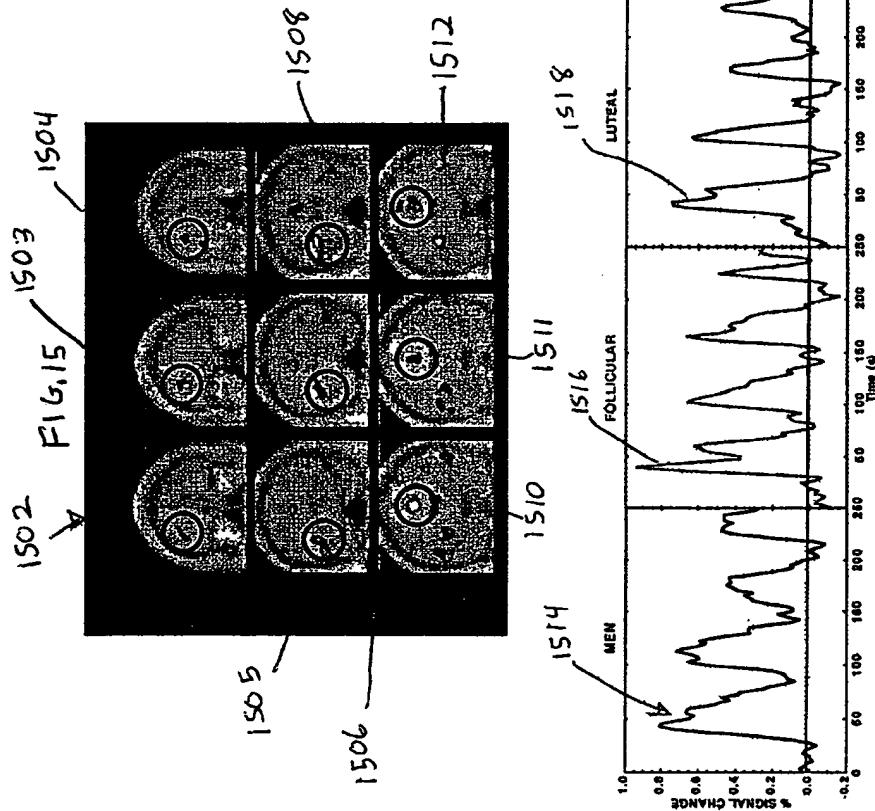


FIG. 15A FIG. 15B FIG. 15C

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES
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Begin



1602

Select Candidates for
Clinical Testing



1604

Select First and
Second Subsets of
Candidates



1606

~~Exposure~~ ^{Exposure}
Candidate Subsets

Administer Drug or Placebo to Candidate Subsets



1608

Perform First
Neuroimaging Scan



1610

FIG. 16

~~Repeat Subsets~~ ^{Candidate}

Administer Drug or Placebo to Candidate Subsets



1612

Perform Second
Neuroimaging Scan



(A) COR TO F.S. 16 A

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(B) (from Fig. 16) *Fig. 16A*

Measure physiological and psychophysical
Responses of first and Second
Candidate Subsets

Measure physiological and psychophysical Responses
OF First and Second Candidate Subsets

Correlate Neuroimaging Data
with Psychophysical and Physiological
Responses

END

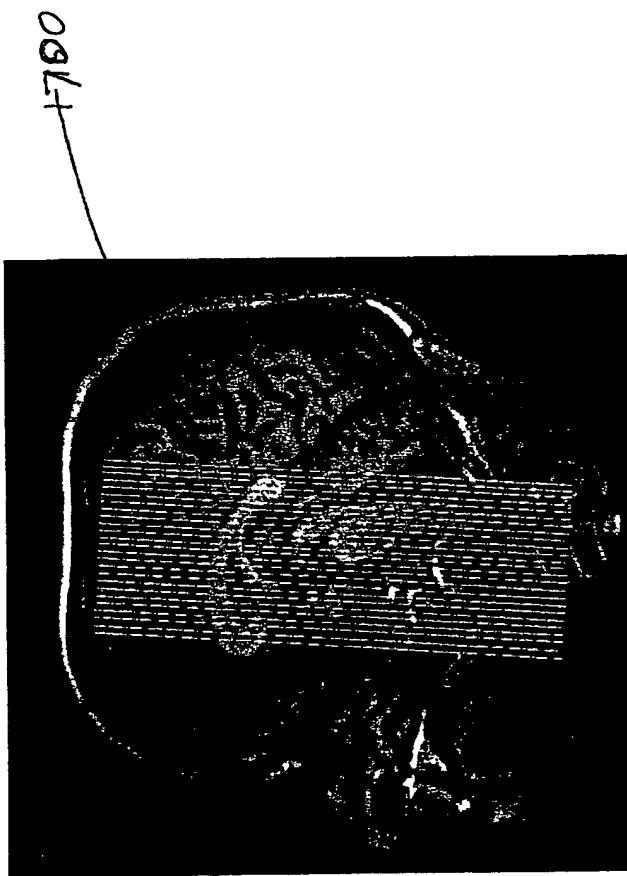
Fig. 16A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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Fig. 17



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